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ABSTRACT

In 1983 Australia experienced unexpected nation-wide increases in enrollment in post-compulsory schooling (Year 11 and Year 12). This study sought to identify factors contributing to this increase, to assess the extent and characteristics of the change, and to examine the motivations and expectations of the students concerned. Patterns of school retention were considered in relation to the influences of the economic environment, the social-psychological environment, and the school environment on individual decisions to remain in school. Data were analyzed on three levels: school systems, schools, and students. Chapter 2 outlines the study's design and methodology. Chapter 3 describes the patterns and trends in government school systems retention, their relationship to non-government schools and to opportunities in equivalent programs through Technical and Further Education. Chapter 4 examines differences between schools in retention rates and the types of recent program developments occuring in schools. Chapter 5 and 6 report on students' reasons for staying in or leaving school and their intentions for further study. Chapter 7 reviews the findings on factors influencing retentivity in Australian government secondary schools. Appendices contain detailed information on the retentivity measures, two student questionnaires, and the school curriculum and organization questionnaire. (BS)

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PATTERNS OF RETENTION IN AUSTRALIAN GOVERNMENT SCHOOLS

TM 850 514

NOTES

John Ainley
Margaret Batten
Hilary Miller

TM

ACER Research Monograph No.27

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Margaret Batten
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November 1984

CHAPTER 1

INTRODUCTION

Participation in post-compulsory schooling has been the subject of much recent discussion in educational and political circles in Australia, stimulated by the unexpected nation-wide increase in Year 11 and Year 12 enrolments in 1983. This study sought to identify some of the factors which might have contributed to this increase, to assess the extent and characteristics of the change, and to examine the motivations and expectations of the students concerned.

Some Background Considerations

In approaching this study it was convenient, following a distinction made by Hayden (1982), to think of three types of potential influence on individual decisions to remain at school and, at an aggregate level, on school retention rates. These three potential influences were the economic environment, the social-psychological environment, and the school environment. Patterns of school retention could then be considered in relation to the interactions between these elements of a social system. At this stage a causal chain was not proposed. Rather, it was envisaged that certain elements would influence each other and that in order to understand patterns of school retention it was necessary to examine those elements and the interactions between them.

In reviewing some of the background to the study, consideration was given to established patterns of retention as well as the contemporary changes.

The Economic Environment

In discussing this influence on school retention, attention was focused on the aspect of the economic environment which would be expected to impinge most directly on the decisions of young people to stay at school: job opportunities. At face value there appeared to be grounds for assuming that lack of job opportunities could be strongly linked to increased retention. Between February 1982 and February 1983, during which time there was a rise in teenage unemployment, there was also a substantial decline in employment for teenage males, a reduction in the number of apprenticeships, and a less substantial decline in employment for teenage females. Not only had the decline in jobs corresponded to increased school participation, but the distribution of the decline in jobs between males and females matched inversely the relative rises in school participation rates. The argument appeared persuasive. However, a little caution was needed in assuming this to be the sole cause of increased participation. One cross-sectional study revealed only a modest relationship between school participation and local level of

unemployment (Miller, 1983), and the study of retention in Victoria by Ainley, Batten, and Miller (1984) suggested considerable variation between schools in apparent retention rates even after controlling for differences in the social environment. A study by Merrilees (1981) of labour market conditions and school enrolment rates found that younger teenage students (15 years old) were influenced by labour market conditions at the end of a school year when deciding whether or not to prolong their education, but the decisions of older students were not strongly affected by prevailing labour market conditions.

A second aspect of the economic environment to be considered in relation to changed school retention was the financial cost of returning to school, relative to available alternatives. A study of retention and family income (Thomson, 1983), carried out in conjunction with the 1980 census, showed an association between educational participation and family income, which was more marked for secondary than for tertiary students. This result was interpreted by Thomson as suggesting that in 1979/80 the Tertiary Education Assistance Scheme (TEAS) may have been more successful than the Secondary Allowance Scheme (SAS) in inducing students from low-income families to remain in full-time education. The results reported by Thomson were based on measures of association between family income and educational participation. As a consequence, it remains possible that the observed association could have arisen from other factors linked to both family income and educational participation. Beswick, Hayden, and Schofield (1983:55) concluded from the results of a survey of young people who left school after Years 10 and 11 that financial considerations influenced the decision to leave school 'only to a very limited extent except insofar as earning money offered independence and opportunities for personal development which were felt to be denied by continuing at school'. Another study which was specifically concerned with evaluating the Secondary Allowance Scheme reached a conclusion consistent with that finding. Meade (1982:29) concluded that a knowledge of SAS did little to change educational plans which were generally resolved at a much earlier stage of schooling than Year 10. It would appear that the evidence supporting a direct influence of financial costs on a decision to return to school is not conclusive.

These two types of economic factors - labour market conditions and schooling costs - altered during the time at which secondary school retention rates rose. The first altered through a further decline in job opportunities for young people and the second through an increase in the level and availability of assistance under the Secondary Allowance Scheme. For this reason, and because the influence of these factors could have been greater for some groups of students than in general, it was planned to examine the importance of these influences relative to other factors.

The Social-Psychological Environment

From previous research it seemed that two social factors which emerged as being positively associated with a decision to remain at school were high socioeconomic status and being the child of a migrant from a non-English-speaking country. Socioeconomic status and ethnic background are often inversely correlated so that the effect of each is masked. However, in reviewing research on these social factors it was useful to examine the evidence concerning each separately.

Family socioeconomic status has been consistently found to be associated with participation in education. Studies at the individual level by Rosier (1978), Williams, Clancy, Batten, and Girling-Butcher (1980) and at the school level by Ainley et al. (1984), all found that higher socioeconomic status was linked with staying at school, using parental occupation as the measure of socioeconomic status. However, the size of this effect was smaller than has sometimes been assumed. Family income has also been used as a measure of socioeconomic status, as in the studies by Burke (1983) and Miller (1983) using the 1976 census data from two States. Both studies found that family income was associated with the level of school participation, but the observed pattern could have been due to either the direct influence of family income, or to social processes associated with family income and socioeconomic status. A study by Williams, Batten, Clancy, and Girling-Butcher (1981) reported an association between family social background status (a composite of parental occupation and education) and intention to stay on at school. In an attempt to separate the influence of various social background factors, Power (1984) looked at the effect of parental education and parental encouragement, and suggested that these socioeducational factors were more strongly linked to retention rates than socioeconomic status. The results reported by Power were consistent with the conclusions of Beswick et al. (1983), that, in terms of both the transition from secondary to tertiary education and the retention of students in tertiary education, parental encouragement was a stronger influence than the economic aspects of socioeconomic status.

Several studies have established a link between ethnic background and retention rates. Taft (1975), in a Victorian study of migrant student aspirations, reported that a higher proportion of students of non-English-speaking origin than Australian-born students completed Year 12 at secondary school. Williams et al. (1981) found that, relative to Australian-born students like them in other respects, 16 per cent more non-English-born students planned to complete Year 12. Interpolating from their Victorian high school data, Ainley et al. (1984) suggested that in the Victorian system, schools with a higher proportion of students of non-English speaking background tended to have higher retention rates than schools with few students of that background, if other characteristics of the schools were equivalent. Interpreting the results of studies

such as these, Hayden (1982) suggested that the influence may derive from higher levels of aspiration among young people of certain ethnic backgrounds, and possibly stronger parental encouragement in those groups for young people to continue with formal study.

Two other social factors were relevant even though the effects were not generally uniform over time or in different States: rurality and sex. With regard to rurality, Williams et al. (1980) discovered no significant association with staying at school in their Australia-wide study, while Rosier (1978) found some rurality effects in non-government schools but not in government schools. In Victorian government high schools, Ainley et al. (1984) did find a small association between rural location and retention, and there was some evidence from a Western Australian study (Dunnell, 1980) that influences on students' decision to stay at school differed according to metropolitan or rural location. In some States it appeared that rural location may have had a greater influence than in other States. Just as the relative retention rates for males and females have fluctuated in recent years, with a general relative increase for females (see Poole, 1981), so the net effect of sex on staying at school has varied for different cohorts of students (Williams et al., 1980; 1981). A study of Victorian Year 10 students' school-leaving intentions (Ainley et al., 1984), showed that the effect of socioeconomic background and a non-English-speaking background on intention to remain at school was greater for males than for females.

Personal factors such as self concept of ability (after allowing for measured achievement), educational aspirations, and the perceived supportiveness of teachers have been found to be associated with a propensity to remain at school after allowance has been made for the influence of the social factors mentioned above (Rosier, 1978; Williams et al., 1980, 1981).

It seemed highly implausible to suggest that there had been changes in these social and psychological factors between 1982 and 1983 which would 'explain' the changes in retention rates which have occurred. However, it was possible, and thus worthy of investigation, that the changes in retention have had an effect on the previously established relationships between these factors and staying at school.

The School Environment

Little direct evidence has existed of an effect of identified school factors, such as curriculum and organization, being related to school retention. Differences in retentivity between school systems (government, Catholic, and other non-government) net of the influence of socioeconomic background, could have reflected differences in the aspirations of parents as much as any possible effect of schooling policy. Some indirect evidence of a possible influence of school factors on retentivity came from a study by Williams et al., (1980) which reported that even though most of those who stayed at school to Year 12 gave reasons extrinsic to the school (for example, higher

qualifications: 76 per cent, get a better job: 47 per cent), nearly 22 per cent indicated a reason which was intrinsic: 'I like it'. This raised the possibility that factors which shaped student perceptions of the school environment might thereby influence retention rates. Wright and Headlam (1976) gave an indication of some of the factors young people felt might contribute to satisfaction with school. These included the opportunity to study subjects that were linked to their present or anticipated experience ('the real world'), experiencing relationships with staff which were personal rather than impersonal, an emphasis on co-operation rather than competition and a system of rules appropriate to young adults. In common with many other studies, they noted that those who left before Year 11 expressed greater dissatisfaction with these aspects of school life than those who stayed. However, Rosier (1978) concluded that the tendency for young people to remain at school was essentially unrelated to their general attitude to school, after controlling for the influence of other factors such as achievement. The interaction of attitudes, achievement and participation in schooling remains a fruitful field for further investigation.

A study of Victorian high schools (Ainley et al., 1984) produced evidence that differences in progression rates from Year 11 to Year 12, after taking into account social background factors, were associated with differences in the type of curriculum offered at Year 12. Higher progression rates for this transition were noted in schools which offered some alternative to the Higher School Certificate Group 1 subjects. Although the number of schools providing such an alternative program was relatively small, the average retention rate from Year 11 to Year 12 was higher in these schools than in those where no alternative was offered. More detailed studies of sixteen schools revealed a variety of ways in which school policies appeared to be associated with differences in retention. In general, schools with high retention either had well co-ordinated programs, provided alternative programs, matched programs to student aptitudes, or had an academic orientation and successful public examination records. Students in the sixteen schools placed greatest importance on the personal investment value (career, job) in deciding to remain at school. However, enjoyment and interest in school were middle ranked reasons for continuing at school. Among Year 10 students an intention to remain at school was associated with feeling successful and the perceived quality of school life. It was also found that both curriculum factors and the extent of co-ordination of the school program were associated with the students' perceptions of the quality of their school life.

The Proposal

It was envisaged that the study would be concerned with both explanation and prediction. In terms of explanation, it would seek to unravel the complex of factors

which might have been associated with the change in retention between 1982 and 1983, including changes in the reasons given in past studies for students staying at school, such as intrinsic rewards, long term rewards, and a negative factor, the unavailability of jobs. As part of this, it would examine whether there had been a change in the relationship between staying at school and such factors as socioeconomic status. In addition, there would be a preliminary essay into the issue of whether some types of school program had proved more attractive than others to students staying at school. In terms of prediction, the study would identify the intentions of students for the future, in order to determine whether to expect the increased retention at school in 1983 was likely to flow on to an increased demand for post-secondary education in future years.

In accordance with the considerations outlined above, three levels of analysis were envisaged for the study: school systems, schools, and students. These three levels of analysis were used so that each could provide complementary perspectives on data provided by the other two levels of analysis. Even though the analyses relied on separate sources of data, whenever possible an attempt was made to integrate the perspectives of each.

The analyses of patterns of retentivity in school systems mainly utilized data on enrolments, retention rates, and demographic patterns normally made available through a range of official publications outlined in Chapter 2. No new data relating to retentivity at this level were gathered as part of the present study though it was necessary to obtain greater detail than was published for some of the statistics.

Analyses conducted at the school and student level did require additional data and two aspects of the study were proposed to meet these requirements: a secondary follow-up analysis of a study undertaken in 1978 (Rosier, 1980), and a survey of students and schools in 1983.

The 1983 survey sought information from samples of students in Years 10 and 11 in a sample of government schools around Australia. The information included students' reasons for continuing at school, their plans for the future, and details of their home backgrounds. These data were augmented by information from school principals about enrolment trends and the curriculum range at Year 11 and Year 12.

The secondary analysis examined data from a different sample of schools and did not involve any direct contact with the schools. The sample of schools had taken part in the IEA mathematics study (13-year-olds) in 1978. Data from that study provided information about the group of students who at that stage were beginning secondary school and who would have completed their schooling between 1981 and 1983. It enabled measures of average socioeconomic level and school ethnicity to be constructed. For these schools, information was obtained from Education Department records about retention rate (or enrolment by year level) data for the period from 1979 to 1983. This

enabled a series of between school analyses, which were intended to reveal fluctuations over time, and changes in relation to social characteristics of the areas served by schools.

The Structure of the Report

The structure of the report reflects the planned structure of the study. Chapter 2 contains details of the conduct of the study, the methods used to gather data, and the statistics used in interpreting those data. Even though issues discussed in this methodological chapter may provide important qualifications to the inferences drawn from data in subsequent chapters, only an outline has been provided in the text with greater detail being included in Appendix I.

Chapter 3 is concerned with patterns and trends in retentivity in school systems. Though this chapter, and the report as a whole, is primarily concerned with government schools, patterns in government school systems are discussed in relation to non-government schools and the provision of opportunities for study in equivalent programs through Technical and Further Education (TAFE).

Chapter 4 examines differences between schools in retention rates and also the types of program developments which have occurred in schools in recent years. Within each of the government school systems studied there were substantial differences between schools in retentivity. Information about a sample of schools has been used to relate these differences to characteristics of the school populations. In addition, information from a 1983 survey has been used to describe some of the developments in the curriculum offerings in the post-compulsory secondary school years.

Chapters 5 and 6 report on the inferences derived from information provided by students in Years 10 and 11 in 1983. These chapters focus on students' reason for staying at or leaving school and their intentions for continuing study through and beyond school.

In Chapter 7 the inferences drawn from the separate examinations of systems, schools, and students have been integrated in an attempt to provide an overview of factors influencing retentivity in Australian government secondary schools.

CHAPTER 2

ASPECTS OF THE METHODS USED IN THE STUDY

There were three major components to the gathering of data in this study of school retentivity: an examination of retention rates at the state or system level using official data, an investigation of retention rates and changes in retention rates in a sample of schools, and a survey of students and their schools in 1983. The present chapter reports on methods used in gathering and analyzing these data on which the subsequent interpretations have been based.

Measures of Retentivity

In previous studies a variety of measures have been used as indicators of the propensity of young people to remain in post-compulsory secondary education. In this report the term retentivity has been used as a generic description which encompasses several separate measures designated as apparent retention rates, progression rates, participation rates, age-weighted participation rates, and grade participation rates. In this section a brief outline of various measures has been given with greater detail being provided in Appendix I.

Apparent Retention Rates

Apparent retention rates have been the most commonly used measure of retentivity and most often have been simply referred to as retention rates. These data are in fact ratios of enrolments in Year level L for a given year to the enrolments in the Year level M for a preceding calendar year corresponding to the progress of that cohort through the school. Hence retention rates are best described as grade ratios even though it is convenient to use the more common nomenclature.

In order to have any meaning, retention rates must be accompanied by a specification of both year levels involved as well as the year to which the upper of those levels applied. A convention adopted in publications of the Commonwealth Department of Education and Youth Affairs (1983) has been to designate only the upper year level when the base level was the first year of secondary school. In this report that convention has been followed so that when a base level has not been stated the implied specification is that the retention has been computed relative to the first year of secondary education. When other retention rates have been discussed, such as from Year 10 to Year 12, both levels have been specified.

Progression Rates

The term progression rate has been used to designate a special form of retention rate where consideration is given to the transition from one year level to the next. An example would be for the transition from Year 11 to Year 12 where the progression rate would be defined as the ratio of enrolments in Year 12 to the enrolments in Year 11 in the preceding year.

Apparent retention rates and progression rates do not provide a precise measure of retentivity because the data do not take into account changes to the school population which might result from migration, either from overseas or interstate, the repeating of grades, or transfers between school sectors. A school system or school could have a high apparent retention rate as a result of retaining a high proportion of its own students, or as a result of new students entering the system (or school) at the upper level. For example, retention rates for different States could be affected by migration between States. In States experiencing net immigration the value of the apparent retention rate could be inflated because the numerator was based on a cohort which has expanded. The denominator would not have been adjusted. Conversely in States experiencing net emigration the value of the apparent retention rate could be deflated because the numerator is based on a cohort which has shrunk.

To illustrate the magnitude of the effect of migration, consider the cohort which was 13-years-old in 1978 and 17-years-old in 1982. For Queensland and Western Australia that cohort grew by 6.5 and 4.7 per cent respectively over the period 1978 to 1982. In the Australian Capital Territory, New South Wales and Victoria the growth was between 1.9 and 2.6 per cent over the same period. In South Australia the cohort size changed by only a small amount and in Tasmania there was a decrease of 2.8 per cent. In the case of Queensland the growth in the cohort size, given a retention rate of around 42 per cent (all schools) in 1982, could have contributed about 2.7 percentage points to the apparent retention rate.

As it can be seen that the effect of these factors would be cumulative if distributed across year levels, the impact would be greater on retention rates from the first year of secondary school than on progression rates. For these reasons, alternative measures of retentivity have been suggested for the study of education systems (see for example Taylor, 1983) and have typically involved some form of a participation rate.

Age Participation Rates

An age participation rate, commonly called a participation rate, involves computation of the percentage of a relevant age group in an educational activity such as full-time schooling. As an example of a participation rate, in 1982 some 18 per cent of 17-year-olds were engaged in full-time schooling. Participation rates are typically

expressed in relation to an age range (for example, 15- to 19-year-olds) as well as to a single age level. As measures of retentivity, participation rates would be less distorted by such factors as migration and repeating than retention rates but they would be substantially influenced by differences and changes in age grade distributions. For example, in 1982, 34 per cent of 17-year-olds in New South Wales were enrolled in secondary school but in South Australia only 21 per cent of 17-year-olds were enrolled in school. As elaborated in Chapter 3, this difference did not reflect (and in fact reversed) the relative retentivity of these two States even though for Australia as a whole the modal age of Year 12 students was 17 years. The discrepancy appeared to arise because of the different age grade distributions in each State. In July 1982, 4 per cent of students in Year 12 in New South Wales were aged 16 years, 74 per cent were aged 17 years, with the remainder being 18 years of age or older. By contrast, in South Australia in 1982, one per cent of Year 12 students were aged 15 years, 52 per cent were 16 years of age, 39 per cent were 17 years of age, with the remainder being 18 years of age or older. In view of the comments above, age participation rates can be misleading as measures of retentivity for comparisons between States and over time if there have been shifts in age-grade distribution.

One approach to the problem of differing age distributions within grades would be to define a 'participation rate' in which the denominator was based on the size of an age group which encompassed all of the age groups from which the particular school category was drawn. For example, participation in Year 12 could be defined in terms of the size of the age group aged 15 to 19 years. Even though this would give a relative index, it would suffer the disadvantage of yielding values which did not reflect the proportion of the relevant cohort participating in that level of education. In addition, there could be some small inaccuracies which might arise because of differences in the age distribution within the range specified. Approaches based on a relevant cohort would appear to be more useful as a measure of retentivity. Two such approaches have been outlined below. Both involve the estimation of the size of the relevant potential cohort as a first step. Once those estimates have been made, the participation rate would be calculated by dividing the total year level enrolment by the size of the potential cohort.

Age-weighted Participation Rates

Age-weighted participation rates are based on the percentage of a relevant cohort for each year level using age-weighted population data (see Brewster, Riggs, and Ey, 1984). The size of the relevant cohort according to this method could be estimated from a knowledge of the size of each age level represented in a given year level and the proportion of that age level in the year level. Mathematical details of the estimation procedure have been shown in Appendix I. Once that estimation has been made, the age-weighted participation rate would be calculated by dividing the total year level

enrolment by the estimated cohort size. The index which results then provides a measure of the percentage of the relevant cohort in formal school. There appear to be two crucial assumptions implicit in the estimation procedure. First, it assumes that the age proportions in the year level at school accurately reflect those in the cohort from which the group in school was drawn. If that assumption were not valid (for example, as a result of a differential effect of age within grade on leaving school or grade repetition) and if the adjacent age cohort were of unequal size then the estimate would tend to be inaccurate. Secondly, it assumes that all people in the population age cohort, as estimated by the Australian Bureau of Statistics, would be eligible to be in school. Since, even in the compulsory school ages, there are differences between the population estimates of an age group and the school enrolment figures, that assumption could possibly result in a slight overestimate of the relevant cohort size and, therefore, a slight underestimate of the retentivity of the school system.

Grade Participation Rates

This measure proposed by Taylor (1983) is similar to the age-weighted participation rates described above but employs a different method for estimating the size of the relevant cohort. In this method, age by grade tables are used in conjunction with ABS population estimates to calculate the percentage of a given age group in each year level. The trends in these percentages for the compulsory age groups (actually up to age 14) are then projected to give estimates for the age groups in Years 11 and 12. Those estimated percentages are then applied to the population data for the relevant age groups, and the potential relevant cohort sizes for Years 11 and 12 computed. Details of the method have been described in Appendix I. An implicit assumption of the method would appear to be that patterns such as grade repetition continue from the compulsory school years into the post-compulsory years. The method includes an inbuilt allowance for differences between population estimates and school enrolment data. Taylor detailed an approach based on a cross-sectional analysis of the age by grade tables for each year and this method has been used in the present report. An alternative would be to trace back the cohort concerned through preceding years and to establish projections on those patterns. However, this alternative would be more time consuming and would be complicated by changes in data collection procedures such as the date of the school census, and the classification of students in special schools.

A Comparison of Three Measures

The three principal measures of retentivity outlined above were apparent retention rates, age-weighted participation rates, and grade participation rates. Appendix I contains some results of that comparison, of which a summary has been presented in this

section. It was possible to compare the three measures of retentivity to Years 11 and 12 over the period from 1981 to 1983 for Australia as a whole and for each State.

For Australia as a whole, it was found as expected that the three measures had similar values for each of the six comparisons involved in any year. The values of the grade participation rates were closer to the apparent retention rates (the differences were about 0.4 percentage points at Year 11 or Year 12) than were the values of the age-weighted participation rates (the differences were about 1.2 percentage points for Year 12 and 1.9 percentage points for Year 11). Values for the age-weighted participation rates were consistently lower than the apparent retention rates, whereas the grade participation rates were a little higher than apparent retention rates in 1981 and 1982 but a little lower in 1983.

Across the eight States or Territories it was again found that each of the measures revealed a broadly similar pattern. At each year level for the period from 1981 to 1983 the between States correlation coefficients measuring the association between the measures were above 0.95. However that general high level of association masked some important differences in the pattern, which were revealed on closer inspection. For South Australia, grade participation rates at Years 11 and 12 were a little higher (about two percentage points) than apparent retention rates, and for Queensland, grade participation rates were a little lower (about 2 percentage points) than apparent retention rates. These differences correspond to that which would be expected on the basis of patterns of migration between States. Age-weighted participation rates revealed similar results to those for grade participation though the values obtained were generally a little lower.

In general, it appeared that grade participation rates had the advantage of providing values close to the apparent retention rates for Australia as a whole, and provided a more valid measure of retentivity for the States. Thus grade participation rates probably provide the best available measures of retentivity where it is possible to define the relevant cohort: for Australia, or for a State, the size of the relevant cohort could be estimated from population data, and the grade participation rates would reflect retentivity for the State to which the population data applied. However, for a sector or system, the measure reflected not just retentivity but the proportion of the cohort entering secondary school through that sector or system (assuming the cohort is defined for the State). Similarly, changes in grade participation rates for a sector or system could reflect changes in the proportion of a cohort entering that sector or system as well changes in retentivity. In those circumstances, apparent retention rates would need to be used but with allowance for the extraneous factors which could influence the values obtained.

The comments above apply also to measures of retentivity at the school level. Since the cohort cannot be defined other than by reference to the entering population,

grade participation rates would not be applicable. Any measure would need to be based on the size of the cohort entering the secondary school and it seems that a retention rate based on the group would provide an appropriate measure of retentivity at school. In examining the impact of programs applied at a particular year level, progression rates would often provide appropriate measures.

In summary, there were several alternative measures of retentivity available, and the ways in which each was defined influenced the inferences which could be drawn. The most appropriate measure was determined by the unit of analysis and the research question being addressed. In all cases, the inferences drawn from the data would need to be qualified by the nature of the measure being used.

Estimating the Role of TAFE

In Chapter 3 it will be argued that TAFE provides some programs in Streams 2 to 5 which should be considered as equivalent to Years 11 and 12 in school. Furthermore it is argued in Chapter 3 that neglect of those programs can distort measures of retentivity in some States more than others.

There could be various ways in which equivalence between TAFE programs and courses at Years 11 and 12 in secondary school could be defined. The approach adopted in the present report was based on the years of schooling completed and whether the TAFE program was full-time. In brief, the TAFE enrolments were considered equivalent on the basis of the level of the program and its attendance requirements. Alternative perspectives could take into account the extent to which programs were general or occupationally specific, the nature of the future occupations to which the programs led, or the equivalence of the credentials obtained in terms of access to further education. Those aspects of equivalence were beyond the scope of the present report.

Two sources of data were used to establish an index of TAFE participation equivalent to Year 11 and Year 12 in secondary school. The first was data concerning the students who commenced in TAFE in 1982, and who had reached at least Year 10 in secondary school within the previous two years. The second was the total number of full-time internal students 19 years of age or younger in TAFE in each State and stream. Both sets of data were supplied by the Commonwealth Tertiary Education Commission. There were two steps in the estimation process using these data. The first involved using the commencing student data to estimate the contribution of new TAFE students to participation rates. The second step involved estimating the contribution of continuing students who had, for example, commenced in a Year 11 equivalent program in 1981 and were continuing in a second year of the same program in 1982. The aim of the process was to estimate values for Year 11 TAFE equivalent participation and Year 12 equivalent participation. Details have been provided in Appendix I.

To convert these data to grade participation rates, the equivalent enrolment numbers were divided by the defined cohort size calculated for secondary school participation rates. It is arguable that this value could have been re-calculated but given the rugged nature of the other assumptions this seemed an inappropriate level of finesse.

One of the advantages of using estimates of TAFE contributions in grade participation rate terms was that the denominator at each level was the same for each sector at a national level, or for each system at a state level. Thus the grade participation rates for government schools, Catholic schools, other non-government schools and TAFE would be additive. The sum would be the grade participation rate for the aggregate (state or national) at that year level.

System Level Data

Official data sources described the patterns of retentivity for Australia as a whole or for a sub-section of the population. The sub-sections could refer to States, sectors, or systems. In this report, the term sector has been used to designate whether the data referred to government schools, Catholic schools or other non-government schools. The term system has been used to refer to a sector within a State so that, as an example, the government schools of Queensland would be described as a system. In parts of the report, Victorian government technical schools have been treated as a separate system from Victorian government high schools because those schools have distinctive traditions and have had separate administrations until recently. In Chapter 3, Technical and Further Education has been treated as a sector which provided full-time post-compulsory education that was not classified as higher education and some of which was equivalent to Year 11 and Year 12 at school.

Data Sources

Several sources of official data were used. School enrolments were obtained from bulletins of the Australian Bureau of Statistics in the publications Schools (Reference no. 13.5) for the period up to 1976, Schools Australia (Catalogue No. 4202.0) for the period from 1977 to 1981, and the National Schools Collection (Catalogue No. 4215.0) together with Non-Government Schools (Catalogue No. 4216.0) for more recent years. Recent data were supplied in advance of publication by each State Education Department. In each case the data referred to enrolments at the school census date (July since 1979 and August in the years prior to that). Collated retention rate data based on these school enrolment figures and published by the Commonwealth Department of Education (1983) were used as the basis for much of the analysis of patterns in retention rates.

Information about enrolments in TAFE were obtained from the publication Selected TAFE Statistics and for 1982 were supplemented by additional data provided by the

Commonwealth Tertiary Education Commission regarding commencing students and full-time students aged 19 years or younger. Population data which were necessary to calculate participation rates were obtained from those published by the Australian Bureau of Statistics (1983). Those data only extended to 1982. For 1983 an extrapolation was made on the basis of the 1982 data which were available.

Patterns of School Retentivity

Part of the study focused on the retentivity of a sample of schools; it was concerned with an examination of the associations between retentivity, characteristics of the areas served by those schools, and characteristics of the students entering those schools. Specifically, the analyses were intended to provide information concerning the associations between retentivity and socioeconomic status, ethnic background, type of location, achievement levels of students on beginning secondary school, and attitudes to schooling. On the basis of research reviewed in Chapter 1, it would be expected that retentivity would be higher for schools serving populations of higher socioeconomic status, containing a higher proportion of students of non-English-speaking background, and in an urban rather than a rural location. In addition, it was expected that retentivity would be higher where the achievement levels of beginning students were higher and where students held more positive attitudes to school.

The schools in the sample had been involved in the IEA mathematics study for 13-year-olds (Rosier, 1980). Data from these 13-year-old students were gathered in 1978 when most would have been in Year 8 but with some in Year 7 and Year 9. Those students who had been in Year 8 in 1978 would have reached Year 12 in 1982. A number of measures of the variables discussed above were developed from that study. Data on measures of retentivity were derived from enrolment data supplied by State Education Departments for government schools. The analysis was only conducted for government schools.

The Sample

The sample of schools in this part of the study was based on that used in a study of mathematics achievement among 13-year-olds in 1978 (Rosier, 1980). That study embraced all States except the Northern Territory and included both government and non-government schools. A two-stage sampling design was employed in which schools were selected with a probability proportional to size and then 25 students were selected at random within each school. Greater detail about the original sample has been provided by Rosier (1980:47-51).

The follow-up study reported here was only concerned with the government schools from the sample described above, since they were the focus of the present study. In

Table 2.1 Sample of Government Schools for Analyses of School Retentivity

State	Original design all secondary schools	Original achieved sample	Govt. schools in achieved sample	Govt. schools in follow-up
Australian Capital Territory	20	14	-	-
New South Wales	40	37	26	-
Victoria	40	36	26	26[a]
Queensland	37	34	26	26
South Australia	38	36	30	30[b]
Western Australia	38	33	26	26
Tasmania	36	30	26	26

[a] Comprised of 18 high schools which proceeded to Year 12 and 8 technical schools which proceeded to Year 11.

[b] Only 23 of these schools proceeded to Year 11 and 22 proceeded to Year 12.

addition the follow-up study did not include New South Wales or the Australian Capital Territory for which the enrolment data were not available. A summary of the sample for the follow-up study has been recorded in Table 2.1.

The size of the sample caused us to apply caution with regard to within system analyses, since in some systems there were rather few schools on which to base an analysis of between school differences. To overcome this potential difficulty, most of the analyses were conducted at a national level but after making a statistical allowance (using dummy variables) for differences between States. The larger sample size involved in using this procedure enabled more stable estimates of the strength of relationships.

Construction of Measures: School Characteristics

The between school analyses were based on demographic variables, student achievement and attitude variables, and retentivity measures. The measures related to the first two of these groups of variables were constructed from the original survey data. Some of those measures were formed by aggregating data obtained from students to the school level. Others were directly collected at the school level.

Socioeconomic background. This measure was based on father's occupation for each student in 1978 coded according to the 16-point ANU scale of social prestige (Broom et al., 1977). An average was obtained for each school and that average used as a measure of average socioeconomic level for the school.

Ethnic background. For this variable it would have been possible to base a measure on father's country of birth, mother's country of birth, the student's place of birth, or whether English was the main language spoken at home. The last two of these

were inappropriate in that there was little variance. With regard to father's and mother's country of birth, it seemed that father's country of birth yielded a better measure of ethnic background and embraced more students than mother's country of birth. For each student the coding was as Australian-born, English-speaking overseas or non-English-speaking overseas. For each school the percentage of students whose fathers were born in a non-English-speaking country was computed as the school-based measure of the ethnic background. Because the distribution was skewed, the raw percentages were transformed into quartiles prior to being used in the analyses.

School location. This was based on information provided by the school and was coded as 4 = capital city, 3 = other city of population more than 25,000, 2 = a large town of more than 10,000 people but fewer than 25,000, and 1 = rural.

Achievement levels. Two measures of achievement based on tests administered to the sample of 13-year-old students in each school in 1978 were used. The tests, which have been described in detail by Rosier (1980), were a 72-item mathematics test and a 40-item word knowledge test. As these students were in their first or second year of secondary school, the test scores reflect achievement levels on entry to the schools rather than any result of the secondary school program. For each of the tests, school means were calculated as the average for the sample of students in the school. These means were then taken as measures of the achievement levels of students entering the schools.

Attitudes to school. This was derived from an IEA attitude scale entitled 'attitudes toward school and school learning'. The items included were:

I generally like my school work.

I dislike school and will leave as soon as possible.

I am bored most of the time in school.

I enjoy everything about school.

I like all school subjects.

I enjoy most of my school work and want to get as much additional education as possible.

I find school interesting and challenging.

Items were scored on a 3-point scale (unfavourable, neutral, favourable) and a total score obtained by summing the item responses. A high score thus reflected a favourable attitude to school. School means were calculated using the sample of students in the school.

Measures of retentivity. Retention rates based on July enrolments were used as a measure of retentivity in this part of the study since they were the only school specific measure of retentivity for which data were available. The retention rates used were

from Year 7 and Year 8 to Years 11 and 12 and from Year 10 to Year 12. The latter were used so that comparisons over several years could be made. In most cases these measures were calculated from enrolment data provided by the States. However the data were available in different formats, and some calculations were needed to arrive at a common format. For example, in Tasmania where the secondary school system is split into high schools and secondary colleges, there was no common unit for enrolment data across Years 7 to 12. In that case, the Education Department provided retention rates from Year 7 to Year 11 for the high schools based on its own tracing of the destinations of students from those schools.

The 1983 Surveys

This component of the study was directed primarily towards surveys of students in Year 10 and Year 11 as a means of understanding factors influencing the decisions of those students to remain at school or leave. The time of the year at which the study was undertaken precluded any involvement of students from Year 12. In addition, information was obtained from schools about the nature of the programs which were provided and the enrolment patterns over recent years.

The Questionnaires

The Student Questionnaires. Separate questionnaires for Year 10 and Year 11 students were designed to obtain information about student intentions with respect to staying at school, the relative importance of various reasons for staying at or leaving school, and social backgrounds. The possible reasons for staying at or leaving school were based on those used in a previous study of retentivity in Victorian high schools, but with some additions to cover more fully out-of-school factors which could influence decisions. The stated reasons were formulated so as to obtain student perceptions of the factors which were part of the economic environment, the social-psychological environment, and the school environment.

It was considered important to relate reasons for students deciding to stay at school or leave, and student intentions, to their social background characteristics. The indicator of the students' socioeconomic background was based on father's occupation and that of ethnic background was based on father's country of birth. For each student a measure of perceived ability was derived from the students' self-ratings of their ability relative to their peers.

The questionnaire for Year 10 students asked about the intended stage of leaving school and what the students planned regarding work or study on leaving school. Similar questions were asked on the questionnaire for Year 11 students. In addition, the questionnaire for Year 11 students asked those students whether they had planned to

return to school when they had been in Year 10, whether they were enrolled in an alternative course, and the sources of financial support which applied to them. Copies of both questionnaires have been included in Appendix II.

The School Questionnaires. The school questionnaires were designed to obtain information about the type of curriculum offered in Years 11 and 12, and patterns of retentivity in secondary schools throughout Australia in 1983. Two questionnaires were designed. The first was sent to schools which provided a full secondary education to Year 12. The second, briefer version was sent to schools which provided programs only at Years 11 and 12.

Information about retentivity was obtained from enrolment data, and transfer data, at each year level from 1979 to 1983. Concerning their program, schools were asked to provide information about each subject at Year 11 and Year 12, including the number of students taking that subject and the weekly time allocation. Schools were also asked to indicate any special features of their curriculum or organization for the year levels up to Year 10 and for the senior levels, Years 11 and 12.

The Samples

The study commenced in September 1983. Because of the time involved, it was not possible to obtain the opinions of students from Year 12. In addition, since many Year 11 students would have left school by the beginning of November, and the process of gaining approval from Education Departments and schools took some of the available time, the sampling procedures had to be abridged.

The basic sampling design involved a two-stage sample. At the first stage, schools were selected at random, but with a probability proportional to size, from each of the States involved, and at the second stage, approximately 50 students were chosen from each of the selected schools at Year 10 and Year 11 level. In the first stage of the sampling, the index of school size was the number of 14-year-old students in the school. Schools which contained 14-year-olds but no students from Year 10 were excluded from the target population. In all States except the Australian Capital Territory and Tasmania the same schools were used for the selection of Year 11 students as for Year 10. In the Australian Capital Territory and Tasmania all the senior colleges were included in the study.

Ideally at the second stage of sampling it would have been desirable to have a random sample of students within schools. Time did not permit this as a standard procedure. Instead, school principals were asked to arrange the samples from within the schools. The letter to school principals included this request.

> We would like the questionnaires to be administered to random samples of 50 students at Year 10, and 50 students at Year 11. It seems most sensible for your school to choose the random samples from your lists of names. If it is not

Table 2.2 Sampling and Response Details for Year 10 Survey

	Target sample of schools	Replacements of schools	Replies received (schools)	Response rate	Total Year 10 questionnaires	Average no. of students per school
Australian Capital Territory - High	16	0	16	100	842	53
Victoria - High	28	2	28	100	1437	51
Victoria - Tech.	12	1	12	100	566	47
Queensland	30	3	27	90	1374	51
South Australia	29	0	28	97	1466	52
Western Australia	30	1	30	100	1544	51
Tasmania - High & District High	18	1	18	100	883	49
Total	163	8	159	97	8112	51

convenient to choose random samples it would be possible to have the questionnaire administered to two mixed ability English classes. However, if classes at Year 10 and Year 11 are grouped by ability or aptitude administering to two classes could create problems. If that is the only feasible option please ensure that your selection covers the range of ability (if necessary requesting sufficient forms to cover three classes).

Could you please indicate the way in which the students were selected on the front of the school questionnaire as either random sample, mixed ability classes, or other existing class groups (with a brief description)?

For schools with fewer than 60 students at any year level please have the questionnaire administered to all students at that level.

Details of the sampling have been recorded in Tables 2.2 and 2.3.

Design Effects

In the sample design of the survey the students sampled were clustered within schools. The general effect of such clustering was known to decrease the effective sample size (Ross, 1978). The extent of such a depression depends on the intraclass correlation coefficient and the size of clusters, and is reflected in the value of the design effect factor. The present study used a variety of types of measures which were clustered to varying extents within schools. To calculate a value for the design effect factor (deff) a value of the intraclass correlation coefficient of 0.05 was assumed on the basis of analyses of similar variables reported by Ross (1978), and an average cluster size of 50 was used. On that basis the value of the design effect factor was estimated as 3.5. This was used in correcting values of the F-ratio for differences between means, and the significance levels of correlation and regression analyses, where the analyses were based on student data.

Administration

Schools were first contacted by letter inviting their participation in the study. Each letter was accompanied by copies of each questionnaire so that schools would know in advance what was involved in acceptance of the invitation to participate. After one week, each school principal was contacted by telephone. Most (95 per cent) accepted, and the few who declined were replaced by the next available school on the sampling list. On acceptance, the copies of questionnaires were forwarded to schools, with a letter outlining procedures for administration and a 'Freepost' postal bag for return of the completed questionnaires. The follow-up contacts which were necessary were made by telephone.

Overall, the response rate from those schools which agreed to participate was extremely high, with around 97 per cent of schools responding. Even allowing for the replacements, this amounts to over 92 per cent of the original sample. Details of the response rates and the number of completed survey forms returned have been shown in Tables 2.2 and 2.3.

Table 2.3 Sampling and Response Details for Year 11 Survey

	Target sample of schools	Replacements of schools	Replies received	Response rate	Total Year 11 questionnaires	Average no. of students per school
Australian Capital Territory - Colleges	7	0	7	100	341	49
Victoria - High	27[a]	2	27	100	1382	51
Victoria - Tech.	12	1	12	100	574	48
Queensland	28[b]	3	27	96	1339	50
South Australia	29	0	28	97	1298	46
Western Australia	25[c]	1	25	100	1229	49
Tasmania - Colleges	7	0	7	100	353	50
Total	135	7	133	98.5	6516	49

a Excludes one school in the original sample without Year 11.
b Excludes two schools in the original sample without Year 11.
c Excludes five schools in the original sample without Year 11.

The Methodology in Summary

The methods outlined in this chapter were designed to provide a series of complementary perspectives on retentivity in government schools. In order to be able to utilize data from official records, several measures were applied and methods of incorporating data from TAFE were developed. It was considered that beyond the present study it was important to develop methods of integrating TAFE enrolment data in programs equivalent to Year 11 and Year 12, in a way which provided as much consistency as possible across States. For the present study, an estimation procedure was developed and can no doubt be refined further. In examining differences between schools, a data set from another study was merged with more recently acquired enrolment data. The techniques of secondary analysis were applied to the combined data set. Generally those techniques involved using the available data to construct measures of the variables on which present interest was focused. In the survey, the prime concern was to establish contact with students before the end of the 1983 school year. This necessity involved some compromise in sampling design but was rewarded with a very high response rate.

A major purpose of the study was to provide information to the Commonwealth authorities as soon as possible. This was achieved through a series of progress reports. The first of these concerned the results of the Year 10 survey and was delivered at the end of December 1983. In January 1984 a progress report based on the Year 11 survey was provided. Subsequently in March, April and May reports were provided on special features of school programs, the Secondary Allowance Scheme (SAS), and patterns of retention in Australian school systems. This report incorporates the data and ideas presented in those progress reports with a number of extensions. In addition, at the end of Term 1 in 1984, each school which participated in the 1983 survey was provided with a statistical summary of the responses given by students in that school to the questionnaire. In these ways it was planned to have a wider impact than that which would follow from a final report by itself.

CHAPTER 3

PATTERNS AND TRENDS IN EDUCATION SYSTEMS

The education systems of the Australian States exhibited different patterns of retentivity of students to and through the post-compulsory years of schooling. These differences, which appeared to be quite substantial, could be attributed to differences in structural characteristics (for example, employment opportunities, socioeconomic level, ethnic composition, rurality), or to policy factors such as the nature of the school curriculum and the extent of other opportunities for study. This chapter examines the established patterns of retentivity in different school systems, and more recent trends in retentivity. It is mainly concerned with government schools but the analyses are complemented by some information about non-government schools and about the Technical and Further Education sector. Data related to schools used in this chapter were drawn from official documents assembled by the Commonwealth Department of Education and Youth Affairs (1983), Ministerial reports in each State, demographic data reported by the Australian Bureau of Statistics (1983), and more recent school enrolment data provided directly by State Education Departments.

In order to analyze the contribution of TAFE to participation in post-compulsory schooling equivalent to Year 11 and Year 12, data were drawn from Selected TAFE Statistics 1982 (CTEC, 1983) and from more detailed information supplied by the Commonwealth Tertiary Education Commission. In using these data a number of assumptions and approximations needed to be made to estimate equivalent enrolments to Year 11 and in Year 12. Those assumptions and approximations have been set down explicitly in the detailed discussion in Chapter 2.

Patterns of Retentivity in School Systems

The data in this section refer to apparent retention rates and were based on enrolments recorded in official reports. As discussed in Chapter 2, apparent retention rates were estimated by calculating grade ratios such as:

$$G(8,12,82) = N(12,82)/N(8,78)$$

where G(8,12,82) was the grade ratio taken as a measure of retention from Year 8 to Year 12 for the cohort in Year 12 in 1982, N(12,82) was the enrolment in Year 12 in 1982 and N(8,78) was the enrolment in Year 8 in 1978. A high value for such a ratio could arise from a system retaining a high proportion of its own students or by a net transfer into the system (from other school systems, from other States, from mature age enrolments, or from students arriving from overseas).

Table 3.1 Retention Rates for School Systems in Australia between 1980 and 1983

System	Government[a]	Catholic	Other non-government
Year 7/8 to Year 12			
1983	34	51	93
1982	30	48	89
1981	29	46	86
1980	28	44	88
Year 7/8 to Year 11			
1983	58	70	105
1982	52	66	104
1981	50	63	103
1980	49	61	104
Year 7/8 to Year 10			
1983	92	97	109
1982	91	96	109
1981	89	95	108
1980	89	94	107
Year 10 to Year 11			
1983	64	73	96
1982	58	69	96
1981	56	67	96
1980	56	66	96
Year 10 to Year 12			
1983	38	54	86
1982	34	51	83
1981	33	50	82
1980	32	48	83
Year 11 to Year 12			
1983	66	81	89
1982	60	76	87
1981	60	76	85
1980	58	74	86

Note: Data have been based on July enrolments.

a Government school figures to Year 12 are underestimates because Year 8 enrolments in technical schools from Victoria are included even though Year 12 equivalents in the Tertiary Orientation Program are not. To illustrate the difference, the figures for 1983 for Year 8 to Year 12 would be 37 per cent if Victorian technical schools were omitted entirely and for 1982 the retention from Year 8 to Year 12 would be 33 per cent. In a later section an allowance for enrolments in the Tertiary Orientation Program has been made.

Government and Non-government Schools

Table 3.1 contains information about retention rates to Years 10, 11, and 12 for government and non-government schools across Australia. It can be seen that in 1982 the apparent retention rate from the beginning of secondary school to Year 12 in government schools was 30 per cent. By contrast in Catholic schools the apparent retention rate to Year 12 was just under 50 per cent and for other non-government schools the figure was nearly 90 per cent. It can also be seen that differences between the retention rates for each of the school systems were greater at Year 12 than at Year 11 or Year 10. Retention rates to Year 10 and Year 11 in non-Catholic, non-government schools exceeded 100 per cent, as a result of net transfers into those schools.

In terms of retention rates to Year 12, the figures for government schools were probably underestimates because of the nature of the Victorian technical school system. Those schools have traditionally concluded at Year 11, though in 1983 some offered Year 12. Many students on completion of Year 11 could enter TAFE programs such as the Tertiary Orientation Program (TOP). Those enrolments do not appear in the numerator for the calculation of retention rates though they do appear in the denominator. If Victorian technical school enrolments were eliminated entirely, the government school retention rates to Year 12 for Australia in 1982 and 1983 would be 33 and 37 per cent respectively. In a later section of this chapter a correction for participation in full-time TAFE programs has been made.

Table 3.1 also contains data concerning progression rates from Year 10 to Year 11, from Year 11 to Year 12, and from Year 10 to Year 12. These data provide an additional perspective on the patterns evident in the retention rates from Year 8 to the senior years. A comparison of the retention rates from Year 8 with those from Year 10 suggests that part of the very high apparent retention rates for other non-government schools was due to transfers of students in years up to and including Year 10 from government to non-government schools. This could have added at least 6 or 7 percentage points to the non-government school retention rates to Year 12. In addition, further transfers into Year 11 could have resulted in an even greater increase.

From the data in Table 3.1 it could be inferred that between 1982 and 1983 there was an increase in the apparent retention rates of all school systems. This increase could be best examined through the progression rates from Year 10 to Year 11, and from Year 11 to Year 12. For the transition from Year 10 to Year 11 the increases in the progression rates for government and Catholic schools were 6 and 4 percentage points respectively, while there was no increase for other non-government schools. For the progression from Year 11 to Year 12 the increases for government and Catholic schools were 6 and 5 percentage points respectively while that for other non-government schools was 2 percentage points. A possible explanation for the discrepancy between the pattern

of retention rates from the beginning of secondary schools and progression rates for single year transitions to Year 11 and Year 12 in the case of other non-government schools could be that the increased apparent retention rate to Year 12 partly reflected an increased number of transfers to those schools in earlier years.

Government School Systems

Table 3.2 records retention rates for the government schools in each State from 1978 to 1983, from the first year of secondary school to Years 10, 11, and 12. Table 3.3 provides complementary data showing progression rates from Year 10 to Years 11 and 12, and from Year 11 to Year 12. All the data were based on July enrolments. In Victoria, data have been reported separately for high schools and secondary technical schools.

Data from these tables were used to record the patterns of retentivity to Years 10, 11 and 12 from the first year of secondary school for the cohorts which would have reached Year 12 in 1983 and 1982. Those patterns have been shown in Figures 3.1 and 3.2 respectively. Between them Tables 3.2 and 3.3 and Figures 3.1 and 3.2 show both established patterns of retention in government secondary school systems and changes in retentivity in recent years.

Patterns of retention. As shown in Figure 3.2, in 1983 the government secondary school systems catering for most students retained between 31 and 41 per cent of the beginning cohort to Year 12. Three exceptions were the Australian Capital Territory in which this retention rate was 76 per cent, Tasmania, in which the retention rate was 22 per cent, and Victorian Technical schools which, in most cases, did not offer a Year 12 course of study.

Of the main high school systems, Victoria and South Australia retained over two-thirds of the students to Year 11, and subsequently lost about half of those from Year 11 in the transition to Year 12. The Northern Territory had a similar pattern to these but with considerably lower rates of progression from Year 11 to Year 12 than was the case for South Australia and Victoria. By contrast, in New South Wales and Queensland, only around half of the students remained to Year 11, but of those who reached that level over 80 per cent continued to Year 12. Tasmania and the Australian Capital Territory could be considered part of this latter group only in the sense of having a high progression rate from Year 11 to Year 12. In the Australian Capital Territory the overall retention from the beginning of secondary school to Year 11 or Year 12 was much higher than in other systems with a high progression rate from Year 11 to Year 12.

The secondary school system in Western Australia was intermediate between the two main patterns described above. Its retention rate to Year 11 was higher than that of New South Wales or Queensland (though not as high as Victoria or South Australia) and its progression rate from Year 11 to Year 12 was lower than that of those States (but higher than for Victoria and South Australia).

Table 3.2 Apparent Retention Rates in Government School Systems 1978-1983

	Year level from	Year level to 1978			1979			1980			1981			1982			1983		
		10	11	12	10	11	12	10	11	12	10	11	12	10	11	12	10	11	12
Australian Capital Territory	7	93	77	68	93	73	71	96	77	66	93	80	65	97	79	74	96	90	76
New South Wales	7	83	37	32	84	35	31	84	34	28	85	35	28	87	37	28	89	44	32
Victoria (High)	7	87	65	34	87	64	33	88	65	33	88	66	33	87	67	35	90	73	39
Victoria (Tech)[a]	7	86	51	-	89	52	-	91	54	-	94	55	-	94	61	(2)	95	69	(4)
Queensland	8	92	41	32	92	41	31	95	42	32	96	45	32	97	47	35	98	55	40
South Australia	8	90	69	30	89	70	31	89	72	33	92	74	33	92	74	34	93	78	41
Western Australia	8	93	50	29	93	50	28	94	52	28	94	52	29	98	53	32	98	60	34
Tasmania[b]	7	83	29	23	85	29	25	88	29	25	88	28	21	87	28	19	88	33	22
Northern Territory[c]	8	79	67	19	78	58	23	73	61	20	78	52	18	75	63	17	80	63	19

Note: Figures based on July enrolments after 1980, and prior to that year on August enrolments.

a Very few schools in this category provided Year 12 course of study.

b Figures from 1981 onwards exclude part-time enrolments.

c Data for the Northern Territory were complicated by changes in the classification of some schools and may be less valid as estimates of the holding power of schools.

Table 3.3 Apparent Progression Rates in Government School Systems 1978-1983

	Year level from	Year level to 1978		1979		1980		1981		1982		1983	
		11	12	11	12	11	12	11	12	11	12	11	12
Australian Capital Territory	10	79	68	79	72	84	71	84	71	87	77	93	81
	11		91		91		89		82		92		94
New South Wales	10	43	40	42	38	41	34	42	34	41	34	51	38
	11		85		83		81		82		81		86
Victoria (High)	10	75	40	73	38	76	38	75	38	76	39	82	44
	11		54		51		52		51		52		58
Victoria (Tech.)[a]	10	62	-	61	-	60	-	60	-	65	(2)	73	(5)
	11		-		-		-		-		(3)		(7)
Queensland	10	45	35	45	34	45	35	47	34	49	37	57	42
	11		80		75		77		76		78		85
South Australia	10	80	35	78	36	81	37	81	37	82	38	85	45
	11		45		45		47		45		47		55
Western Australia	10	54	31	54	31	56	30	55	32	56	34	62	36
	11		61		57		56		56		61		65
Tasmania[b]	10	36	29	35	31	34	31	31	25	32	22	38	26
	11		82		86		88		72		69		80
Northern Territory[c]	10	68	23	73	23	78	25	71	23	81	24	85	25
	11		31		34		34		29		33		31

Note: All figures based on July/August enrolments.

a Very few schools in this system offered Year 12.
b Figures for 1981 and subsequent years exclude part-time enrolments.
c Based on very small numbers and complicated by changes in classification of schools.

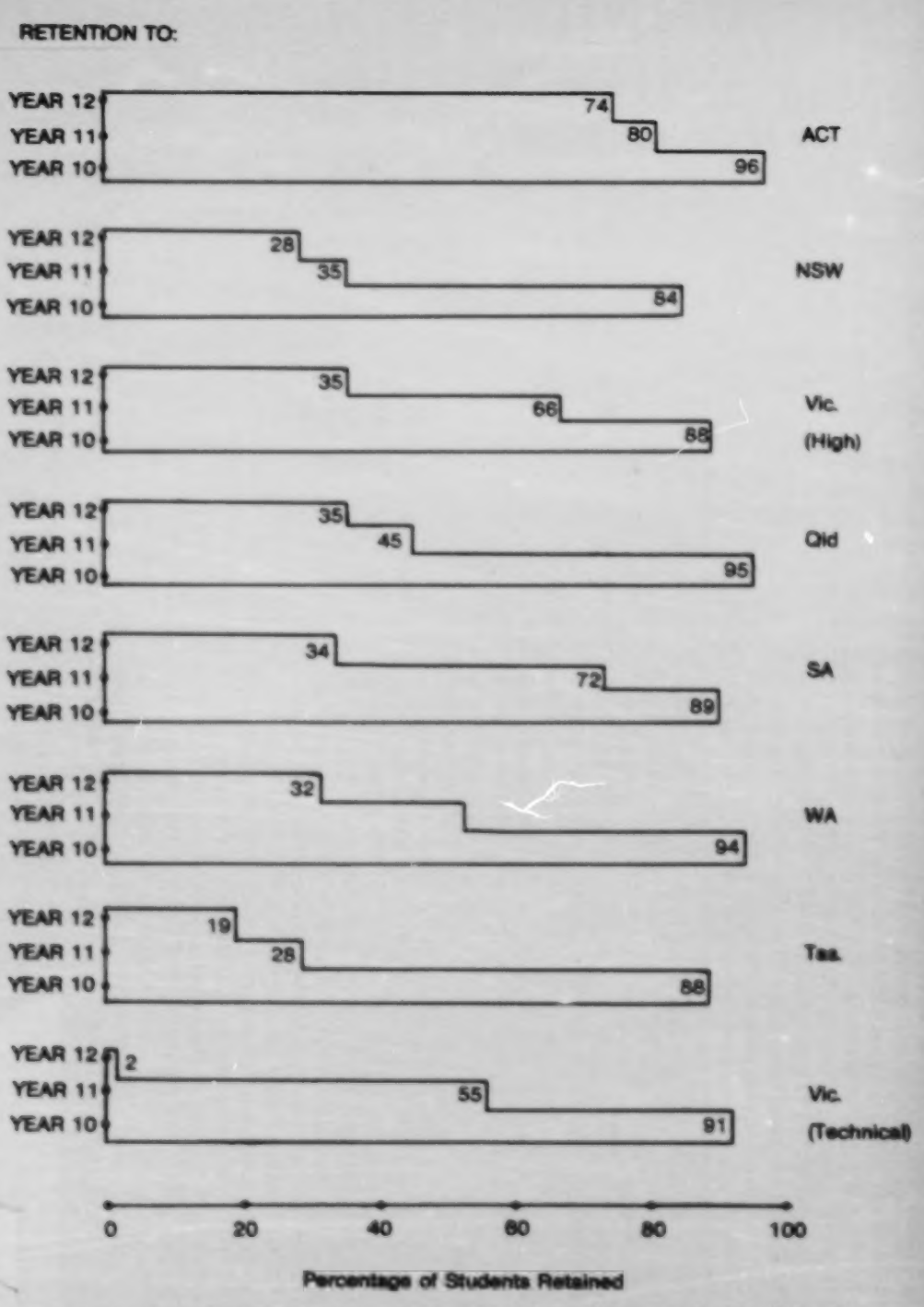

Figure 3.1 Retentivity of Australian Government School Systems for the Cohort Reaching Year 12 in 1982

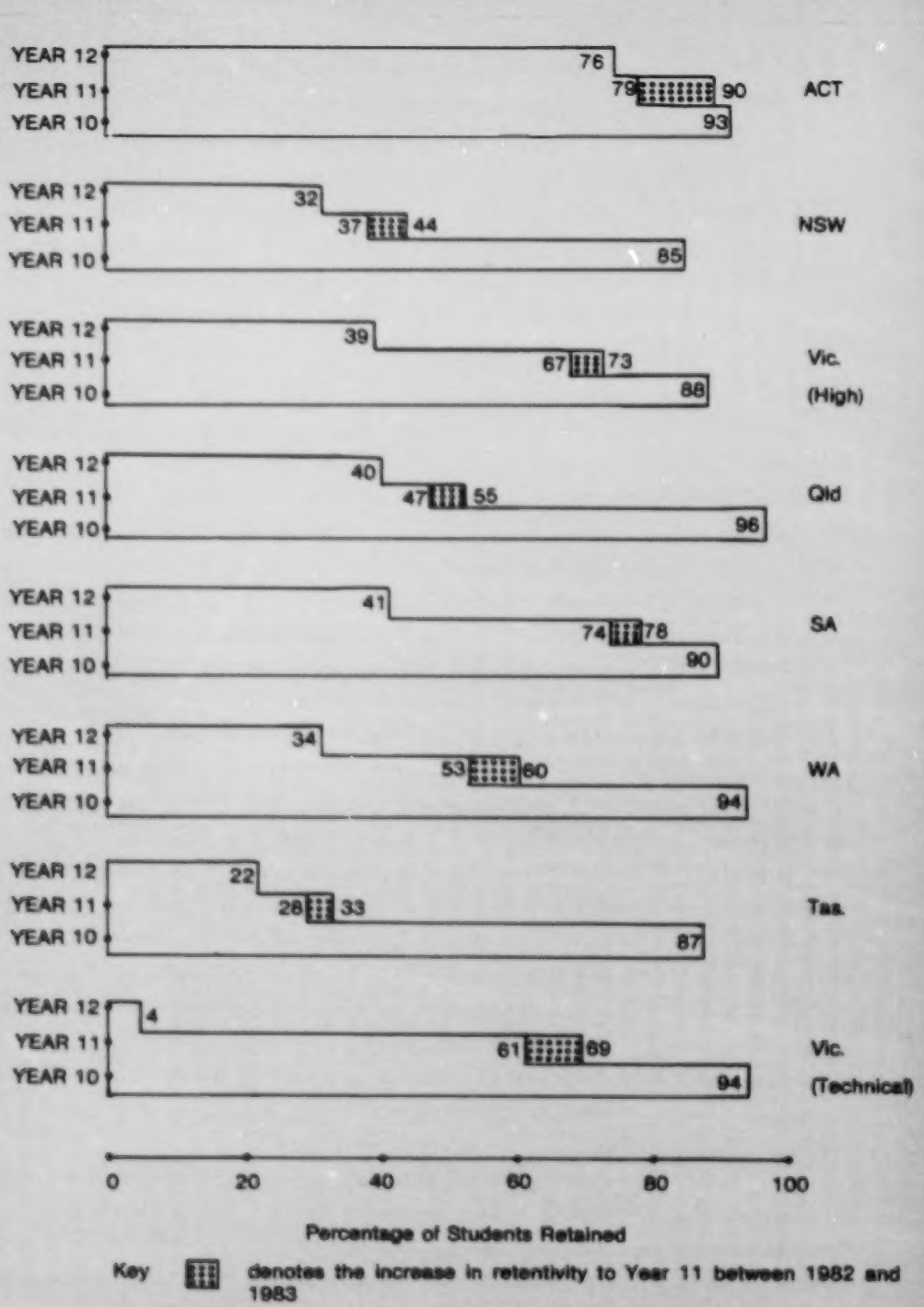

Figure 3.2 Retentivity of Australian Government School Systems for the Cohort Reaching Year 12 in 1983 (expressed as percentages)

In summary there appeared to be three main patterns of retention among government secondary school systems in Australia.

Pattern 1 The first pattern involved relatively high retention to Year 11 and relatively high attrition between Year 11 and Year 12.

Pattern 2 The second pattern involved relatively high attrition between Year 10 and Year 11 followed by relatively high progression from Year 11 to Year 12.

Pattern 3 The third pattern was intermediate between these two main types with the attrition at the end of Year 10 and the end of Year 11 being approximately equal.

The Australian Capital Territory would have been classified in the first group on the basis of retention to Year 11 and with the second group on the basis of the progression rates from Year 11 to Year 12. Given that, with the exceptions of the Australian Capital Territory, the Northern Territory and Tasmania, the overall retention rate to Year 12 for each of the government school systems spanned a fairly narrow range, it could be expected that the different patterns of retention to Year 11 might have reflected curriculum and organizational features of the school systems. In turn, curriculum and organizational features of school systems might have interacted with the expectations held by students. However, the interpretations offered in terms of school factors do not take into account possible differences in employment opportunities between States and to that extent those interpretations are tentative. In examining retention rates to Year 11, it was useful to consider first the pattern which existed in the early 1980s and secondly to consider the previous changes which had occurred over the past decade.

In terms of extant patterns of retention, the systems in the first category tended to provide courses of study at Year 12 which were largely one year courses, whereas those in the second category had tended to provide two year courses completed at the end of Year 12. In systems in the second category, choice and selection of courses for further study would have been influenced by the notion that continuing at school implied a two-year course of study implicitly oriented to post-secondary education. In brief, the difference appeared to be linked to what was accepted as the duration of a general education. Western Australia, the third pattern, reflected an increasing role in recent years for the study at Year 11 of subjects not accredited for tertiary entrance.

In terms of changes over the decade from 1972 to 1982 three patterns were evident in relation to Year 11 retention rates in government schools. First, in Victoria and South Australia which already had fairly high apparent retention rates to Year 11, there was an increase of about 8 percentage points over the decade (from 57 to 65 per cent and from 66 to 74 per cent respectively). In the Australian Capital Territory, where retention to Year 11 had been high, there was an even larger growth from a 64 to 79 per cent

retention rate to Year 11. Secondly, two of the systems from the second category, New South Wales and Tasmania, showed only a small increase of 2 percentage points (from 35 and 26 per cent respectively) in retention to Year 11 over the decade. Thirdly, in Queensland and Western Australia, which had fairly low retention rates to Year 11 at the beginning of the decade, there were substantial increases of around 16 percentage points from 31 per cent and 38 per cent respectively. In both those systems there were, during the decade, changes in the Year 12 examination systems and concomitant changes in the senior school curriculum. Queensland, in the early seventies, adopted the recommendations of the Radford Committee (Queensland, 1970). As a result of those recommendations there was a greater role for school based assessment in certification at the end of Year 12, and there was wider scope for schools to develop and have accredited new subjects appropriate to the aptitudes of their students. Western Australia in the mid-seventies introduced changes to its certification and tertiary admissions procedures. One of the consequences of these changes was the development of General Certificate of Secondary Education subjects (30 in 1983) in addition to Tertiary Admissions Examination subjects (33 in 1983). In conjunction with these two year courses of study there was also a growth of one year non-certificate courses at Year 11. In 1982, these one-year courses enrolled about nine per cent of the students who had completed Year 10 in 1981.

Having made the observations above, it is important to consider also organizational factors and the opportunities for post-compulsory study at equivalent to Year 11 or Year 12 level in such institutions as TAFE colleges. With respect to the structure of the school systems themselves, it is hard to draw any conclusion from the available data. In 1983, the two government school systems (the Australian Capital Territory and Tasmania) which organized the provision of secondary schooling around junior high schools to Year 10 and secondary colleges for Years 11 and 12 had respectively the highest and lowest apparent retention rates to Year 12. Moreover, that was the position of those systems before the structural rearrangements were introduced in those systems. If changes over the decade from 1972 to 1982 are examined, it can be observed that apparent retention rates to Year 12 for government schools across Australia grew only slightly from 28 per cent to 30 per cent. In Tasmania there was a small decline from 20 to 19 per cent, though these figures are complicated by a change in the way part-time enrolments were counted. In the Australian Capital Territory the apparent retention rate to Year 12 grew from 64 per cent to 74 per cent. However, that observation needs to be qualified by the observation that most of the growth occurred between 1981 and 1982, and the possibility that those rates may have been influenced by population shifts in a relatively small system. In brief, it is hard to draw any firm conclusions about the effects of this type of structure on retention without providing a number of caveats related to the type of population being served.

Table 3.4 Changes in Retention Rates between 1982 and 1983 in Government School Systems

	Retention to Year 12			Retention to Year 11			Progression 10 to 11			Progression 11 to 12		
	1982	1983	Change	1982	1983	Change	1982	1983	Change	1982	1983	Change
Australian Capital Territory	74	76	2	79	90	11	87	90	3	92	96	4
New South Wales	28	32	4	37	44	7	41	51	10	81	86	5
Victoria (High)	35	39	4	67	73	6	76	82	6	52	58	6
Victoria (Tech.)	(2)	(4)	(2)	61	69	8	65	73	8	(3)	(7)	(4)
Queensland	35	40	5	47	55	8	49	57	8	78	85	7
South Australia	34	41	7	74	78	4	82	85	3	47	55	8
Western Australia	32	34	3	53	60	7	56	62	6	61	65	4
Tasmania	19	22	3	28	33	5	32	38	6	69	80	11
Northern Territory[a]	17	19	2	63	63	0[b]	81	85	4	33	31	-2
Australia	30	34	4	52	58	6	58	64	6	60	65	5

a Data based on small numbers and involves some reclassification of schools.
b There was a small increase of 0.3 percentage points.

Changes in retentivity. Between 1982 and 1983 there were increases in the retention rates to both Year 11 and Year 12 for all government school systems. Changes in retention rates to Year 10 were small, since all systems retained around 90 per cent of the cohort to that level. Table 3.4 records changes in retentivity to Year 11 and 12 between 1982 and 1983, expressed both as retention rates of the cohorts beginning secondary school and as progression rates from Year 10 to 11 and from Year 11 to 12.

For retention to Year 11 a general increase of about 6 percentage points was noted, whether one considers the retention of the beginning cohort or the progression rate from the previous Year 10. In South Australia the change was fairly small, which probably corresponded to that State having had a stable progression of about 80 per cent of Year 10 into Year 11 for several years.

For retention to Year 12 there was also an increase. In terms of retention of the original entering cohort, the retention rate increased by about 4 percentage points. In terms of the progression from Year 11 to Year 12, the change was about 5 percentage points.

The influence of non-government schools. Retention to the final years of secondary school has differed between systems. Those differences could have arisen from a variety of sources such as employment opportunities, the population distribution, the average socioeconomic level, the opportunities for study through the TAFE system, and the proportion of students attending non-government schools. In this section attention has been given to the proportion of students entering non-government schools.

It has sometimes been suggested that in States where a large proportion of secondary school students enter non-government schools the retention rate for government schools would be lower. This suggestion appeared to be based on the premise that non-government schools attracted students with a greater propensity to remain at school to Year 12. To test this argument, apparent retention rates to Year 12 in 1982 were compared with the percentage of junior secondary school students enrolled in non-government schools in 1978. The data have been presented in Table 3.5. As shown in that table, there did not appear to be any association in the direction postulated. In fact retention rates to Year 12 tended to be a little higher in States where non-government schools attracted more initial entrants. Overall, the correlation coefficient was 0.07, but if Victorian technical schools were excluded it was 0.08. If the Australian Capital Territory system was regarded as anomalous and excluded, the correlations would be 0.4 or 0.7, depending on whether Victorian technical schools were included or excluded. Hence, even though one might not wish to argue the reverse of the original suggestion, there was certainly no basis for supporting it in these data.

Table 3.5 Association between Retention Rates for Government Schools and the Percentage of Students in Non-government Schools: 1982

System	Percentage of junior secondary students in non-government schools (1978)[a]	Apparent retention rate to Year 12 in government schools (1982)[b]
Australian Capital Territory	30	74
New South Wales	23	28
Victoria	27	35 (25)[c]
Queensland	25	35
South Australia	16	34
Western Australia	21	32
Tasmania	17	19
Northern Territory	14	17

a Schools Commission (1982). This year represented the time when the 1982 Year 12 group would have been in junior secondary school.

b Commonwealth Department of Education and Youth Affairs (1983).

c Not including technical schools. The figure in parentheses includes technical schools but is misleading because TOP enrolments are not included.

Grade Participation Rates in Post-compulsory Schooling

Apparent retention rates, based on grade ratios as indicated earlier, provide one measure of the holding power of school systems and schools. However, as noted in Chapter 2, retention rates could be affected by migration between States. In States experiencing net immigration, the value of the apparent retention rate could be inflated, and conversely in States experiencing net emigration, the value of the apparent retention rate could be deflated.

In Chapter 2 it was argued that grade participation rates provided an alternative measure of retentivity. Such grade participation rates reflect the percentage of the relevant cohort in formal school at the year level indicated. The grade participation rates for a State should be directly comparable with retentivity values for the State. In fact, as shown in Chapter 2, the two indicators were closely matched. In general, the pattern revealed by grade participation rates was similar to that revealed by retention rates. Values of retention rates from the first year of secondary school to Years 11 and 12 for 1982 have been shown for each State in Table 3.6 together with the corresponding age-weighted participation rates.

Grade participation rates for school systems were not so directly comparable with retention rates, since the values obtained reflected not only the propensity of students to remain at school, but the relative proportions proceeding through each of the systems. Table 3.7 records Australia wide grade participation rates for government, Catholic, and other non-government schools. These data show that in 1982 some 35 per cent of the

Table 3.6 Comparison of Retention Rates (from first year of secondary school) and Grade Participation Rates for each State in 1982[a]

	Year 11		Year 12	
	Retention rate	Grade participation rate	Retention rate	Grade participation rate
Australian Capital Territory	76	78	73	69
New South Wales	42	43	34	34
Victoria	72	71	34	34
Queensland	54	52	42	41
South Australia	80	82	41	43
Western Australia	58	60	37	38
Tasmania	32	33	22	23
Northern Territory	62	62	18	18
Australia	57	58	36	37

[a] Includes both government and non-government schools.

relevant cohort were in Year 12. Of this group, about 63 per cent were in government schools, 22 per cent were in Catholic schools and 15 per cent were in other non-government schools. At Year 11 some 56 per cent of the relevant cohort were enrolled at school. Of this group of students about 68 per cent were in government schools, 20 per cent were in Catholic schools, and 12 per cent were in other non-government schools. Table 3.8 contains the grade participation rates for government and non-government schools over the years 1981, 1982 and 1983. From that table it was possible to examine in greater detail patterns of participation and changes in those rates over time.

The examination of changes in participation and retention rates was complicated by the fact that one was dealing with small differences between large numbers so that errors were compounded. Notwithstanding that reservation, it was possible to examine trends on an Australia wide basis from the data in Table 3.7. These data revealed the

Table 3.7 Grade Participation Rates by Sector; Australia 1981-1983[a]

	1981		1982		1983	
	Year 11	Year 12	Year 11	Year 12	Year 11	Year 12
Government	39	22	40	23	44	25
Catholic	11	8	12	8	12	9
Other	6	5	7	6	7	6
Total	56	35	58	37	63	40

[a] Figures have been rounded to the nearest percentage point.

Table 3.8 Grade Participation Rates in Senior Secondary School by State and System, 1981 to 1983

State system		Year 11			Year 12		
		1981	1982	1983	1981	1982	1983
ACT	Govt	53	54	58	46	49	50
	Non-govt	22	24	24	21	21	22
	Total	76	78	82	67	69	71
NSW	Govt	27	29	33	22	22	25
	Non-govt	13	14	15	11	12	13
	Total	40	43	49	33	34	38
Vic.[a]	Govt	47	47	51	18	18	21
	Non-govt	24	24	26	16	16	17
	Total	71	71	77	33	34	38
Qld	Govt	33	34	39	24	26	28
	Non-govt	18	18	20	14	15	17
	Total	50	52	59	38	41	45
SA	Govt	63	64	66	29	30	35
	Non-govt	17	19	20	12	13	14
	Total	81	82	86	41	43	49
WA	Govt	41	42	45	24	25	26
	Non-govt	16	18	18	12	13	14
	Total	57	60	63	36	38	40
Tas.	Govt[b]	24	24	28	20	17	19
	Non-govt	8	10	10	7	7	7
	Total[b]	32	34	37	27	23	26
NT[c]	Govt	47	54	59	15	15	16
	Non-govt	9	8	10	3	3	4
	Total	55	62	69	18	18	20
Australia	Govt	39	40	44	22	23	25
	Non-govt	17	18	19	13	14	15
	Total	56	58	63	35	37	40

a Does not include TOP enrolments.
b Excludes part-time enrolments for all years 1981 to 1983.
c Data for the Northern Territory may involve inaccuracies.

same general increase in the propensity of young people to remain at school, as was evident from retention rate data. Between 1982 and 1983 there was a general increase in participation, with that increase being greater at the Year 11 level than at the Year 12 level, and being greater in government schools than Catholic schools, which in turn experienced a greater increase than other non-government schools. This last result was not surprising, given that those schools already retained most of their intake to Year 12.

From Table 3.8 it was possible to examine changes in participation rates in each State over time. In general, the increase in participation was greater between 1982 and 1983 than between 1981 and 1982 for both Year 11 participation and Year 12 participation. For the change between 1982 and 1983, the increase in participation at Year 11 was greater than at Year 12 except in South Australia. In addition the increases in participation were greater for government than non-government schools.

Changes in grade participation rates between 1982 and 1983 have been recorded in Table 3.9 together with changes in apparent retention rates for the same period. For States as a whole the two sets of change scores corresponded reasonably closely at the Year 12 level but at Year 11 the correspondence was considerably less consistent. Departures from correspondence arose mainly in the two smallest States, the Northern Territory and the Australian Capital Territory. In the Northern Territory there had been some schools reclassified from the non-government to the government system and there was uncertainty in the estimation of grade participation rates. Excluding these two small systems for which anomalies were apparent, the correlation coefficient between the two sets of change scores, on a between-State basis, was 0.9 at Year 12 level and 0.7 at Year 11.

In Australian Capital Territory non-government schools (and as a consequence in the Australian Capital Territory as a whole) there was a decline in retention rate but a rise in grade participation rates at Year 12 between 1982 and 1983. On the assumption that this did not arise from an error in recorded data the best interpretation appears to lie in the nature of the cohort from which the 1983 Year 12 in the Australian Capital Territory was drawn. Whereas most cohorts in the Territory expand over time because of net immigration which inflates the apparent retention rate, the size of that cohort did not expand. Consequently the usual inflation of the retention rate did not occur. A similar but much smaller effect occurred in the non-government schools of Tasmania. The examples serve to illustrate the ways in which transmigration can influence retention rates. Even though retention rates correspond closely to grade participation rates in general, changes in retention rates in small systems with large population shifts may need careful interpretation.

The Contribution of TAFE

The Technical and Further Education system provided a wide range of educational programs covering 11 broadly defined Fields of Study (for example, Applied Science, Business Studies) in six Streams (for example, Para-professional, Preparatory), on either a part-time or full-time basis. Even though the majority of enrolments have been part-time (in 1982 part-time enrolments constituted some 92 per cent of Streams 1 to 5) full-time enrolments in TAFE provided a substantial contribution to full-time post-compulsory education in some areas. The Ministerial Review of Post-Compulsory Schooling in Victoria (Victoria, 1984) indicated that in 1982 the Tertiary Orientation Program (TOP) in Victorian TAFE colleges enrolled 4873 full-time students aged 15 to 19 years. This figure was about the same as the Year 12 enrolment in non-Catholic non-government schools.

Table 3.9 Changes in Retention and Grade Participation Rates between 1982 and 1983

	Year 11						Year 12					
	Retention			Participation			Retention			Participation		
	Govt.	Non-govt.	Total	Govt.	Non-govt.	Total	Govt.	Non-govt.	Total	Govt.	Non-govt.	Total
Australian Capital Territory	10.6	5.6	9.0	4.0	0.0	4.0	2.4	-5.3	-0.3	1.0	0.9	1.9
New South Wales	6.9	4.7	6.2	4.2	0.9	5.1	3.7	3.3	3.8	2.2	0.9	3.1
Victoria	6.6	7.7	5.9	4.1	1.6	5.7	2.9	5.1	4.5	2.3	1.6	3.8
Queensland	8.2	5.2	7.6	5.6	1.7	7.3	5.2	4.5	5.2	2.6	1.0	3.6
South Australia	3.7	1.5	3.7	1.8	1.3	3.2	6.5	5.9	6.8	4.7	1.5	6.2
Western Australia	7.7	2.9	6.8	3.1	0.3	3.4	2.5	3.9	3.0	1.0	0.7	1.8
Tasmania	5.2	1.3	4.9	3.9	0.1	3.9	3.3	-1.0	2.0	2.4	0.2	2.5
Northern Territory[a]	0.3	11.7[a]	2.1	5.1	2.0	7.1	2.2	3.6	2.0	1.2	0.6	1.8
Australia	6.7	3.8	6.2	4.2	1.2	5.4	4.1	4.0	4.3	2.4	1.1	3.5

[a] Estimates for the Northern Territory may be inaccurate because of changes in the sector of some non-government schools and difficulties of projection.

If TOP could be considered to be equivalent to Year 12, these enrolments would add about 7 percentage points to the grade participation rate for Year 12, or to the retentivity from Year 7 to Year 12. If a further assumption could be made, and TOP was considered to be part of the government school system, the retention rate from Year 7 to Year 12 in Victorian government schools in 1982 would have increased from 25 per cent to 35 per cent. Expressed differently, adding TOP enrolments to the Year 12 group for government schools would bring the government school retention rate to about the same as that for high schools by themselves. In some ways, full-time enrolments in certificate courses could also be considered equivalent to Year 12 and, as shown by the Ministerial Review (Victoria, 1984), would add even further to the retention rate.

It was observed by the Ministerial Review of Post-Compulsory Schooling that 'continuing controversy persists about whether the TAFE courses discussed above can be considered as equivalent to Year 11 and Year 12 studies undertaken in schools' (Victoria, 1984:10). However, with specific reference to certificate courses and TOP, and also the Vocational Orientation Program (VOP), it observed that:

> as all courses require the common formal prerequisite of either Year 10 or Year 11 for entry, all are pre-tertiary, and offer students pathways to employment and further study, it appears undeniable that these are parallel courses. (Victoria, 1984:10)

Furthermore, the guidelines for the Commonwealth Government's Participation and Equity Program specify the following as a policy objective.

> The Government wishes to achieve a situation whereby at the end of the decade, most young people complete the equivalent of a full secondary education, either in school or in a TAFE institution or in some combination of work and education. (Australia, 1984:2)

The data above have indicated the contribution of some courses from TAFE in Victoria. In other States, and even in Victoria, there were other programs which could possibly be considered to be equivalent to Year 11 and Year 12.

Estimating the Contribution of TAFE

Since TAFE programs span a range of age groups, entry criteria and study modes, an essential part of estimating the contribution of TAFE was to establish which programs should be considered as equivalent to Years 11 and 12. In addition, the estimation of the TAFE contribution to participation was complicated by the aggregation of enrolment statistics into streams which may have included different types of program.

In estimating TAFE equivalent contributions to participation in Years 11 and 12, a number of assumptions and approximations were needed. Some of these were rather gross so that the results should be treated as estimates rather than precise figures.

Table 3.10 Age and other Characteristics of Full-time Internal Students in TAFE Streams 1-5: 1982

Stream	All students		Commencing students	
	Median age[a] (Australian)	Percentage 19 years of age and under[b] (Australian)	Percentage entering TAFE immediately[c] (Australian)	Modal grade level attained[d]
1 Professional	20	44	23	12
2 Para-professional	18	60	53	12[d]
3 Trade	16	80	68	10
4 Other skilled	16	86	71	10
5 Preparatory	17	74	63	11

a Calculated from Selected TAFE Statistics 1982.

b Calculated from Commencing Student Data supplied by the Commonwealth Tertiary Education Commission. Defined as transferring in 1982 or after leaving school in 1981.

c Calculated from Commencing Student Data supplied by CTEC for students either entering immediately or within one year of leaving school.

d Even though the mode is Year 12 the distribution is spread with 32% having reached Year 10, 28% having attained Year 11, and 38% having attained Year 12.

First, only full-time internal enrolments were included. For TAFE, full-time referred to 540 or more student contact hours for the program over a year. This restriction therefore resulted in the exclusion of apprenticeship programs (whether by day or block release) in Stream 3, short training courses in Stream 4, and short remedial courses in Stream 5. The designation of internal enrolments meant that only students undertaking study in a broadly equivalent form to those in high school were included. In practice, the inclusion of multi-modal enrolments made little difference to the overall picture.

Secondly, enrolments in Stream 1 (professional) and Stream 6 (adult education) were excluded as not being equivalent to Years 11 and 12. Stream 2 (para-professional or middle-level technician) courses were considered, since many handbook entries showed that entry was possible after Year 10 but not in all States. However, informal advice was that in practice many entrants to such courses had often completed a full secondary education. Stream 3 (trade, including pre-apprenticeship and pre-employment) and Stream 4 ('other skilled', such as office training and secretarial courses) seemed on the basis of information supplied in handbooks to be equivalent to Year 11 in secondary school. Stream 5 (preparatory) enrolments seemed to be best considered as equivalent to Year 12 in secondary schools. The Tertiary Orientation Program in Victoria provides an example of such a course. However, in many States a wide variety of programs were included in Stream 5.

Thirdly, the age and school levels obtained for full-time internal students in TAFE were examined in order to see whether they corresponded to the equivalent data for Years 11 and 12 at school. Table 3.10 contains data on the age of full-time internal students in TAFE across Australia and the level of schooling reached by commencing students in 1982. These data provide support for the argument that Stream 1 enrolments should be treated as post-secondary rather than the equivalent of Years 11 and 12. The data also support the proposition that in general Streams 3 and 4 could be regarded as equivalent to Year 11, and Stream 5 could be regarded as broadly equivalent to Year 12. On the basis of the data in Table 3.10, Stream 2 might be regarded as equivalent to Years 11 and 12, but in fact it contained a wide range of different types of course in different States. Table 3.11 reports the distribution of grade level attained by commencing students (but only those transferring immediately) in TAFE in each stream and State. The data in that table demonstrate the variations between States in the actual level of entry to TAFE programs and some of the variation within States. Stream 2 in New South Wales seemed to comprise post-Year 12 students as the largest group, but with a substantial component which was post-Year 10. In Victoria and South Australia, Stream 2 seemed largely post-Year 11 and in Queensland, Western Australia and Tasmania, Stream 2 was mainly post-Year 10. Streams 3 and 4 were largely post-Year

Table 3.11 Secondary School Grade Level Attained by Commencing Students in Full-time Internal Courses in TAFE for the Year Prior to Commencement in 1982 (Percentages in Rows Recorded for Each Stream)

	Stream 2				Stream 3				Stream 4				Stream 5			
	9	10	11	12	9	10	11	12	9	10	11	12	9	10	11	12
New South Wales	1	35	10	54	3	83	6	8	1	77	7	16	4	13	14	59
Victoria[a]	0	1	67	32	1	43	49	7	0	40	53	7	1	16	67	15
Queensland[a]	0	59	26	14	0	80	9	11	5	75	9	10	n.a.	n.a.	n.a.	n.a.
South Australia[b]	0	3	58	39	0	0	(61)	(39)	0	13	56	31	(0)	(13)	(50)	(27)
Western Australia[c]	1	77	2	20	0	93	1	5	0	(83)	0	(17)	1	59	3	45
Tasmania	2	75	10	14	0	94	6	0	2	91	5	2	(10)	85	(2)	(2)
Northern Territory	0	0	54	46	0	(17)	(83)	0	8	33	47	12	0	0	(100)	0
Australian Capital Territory[d]	0	19	6	74	0	92	0	8	0	51	10	39	0	29	13	58
Australia	0	33	30	37	2	76	14	8	1	73	11	14	2	17	56	25

Source: Based on commencing students leaving school in 1982 and 1981 and starting TAFE in 1982 as per data provided from the Commonwealth Tertiary Education Commission.

Note: Figures in brackets based on small numbers of valid cases.

a Data for Streams 4 and 5 based on records with more than 10 per cent missing data.
b Data for Streams 2, 4 and 5 based on records with more than 10 per cent missing data.
c Data for Stream 4 based on records with more than 10 per cent missing data.
d Data for the Australian Capital Territory based on more than 10 per cent missing data.

10 except in Victoria and South Australia. Stream 5 appeared to be post-Year 11 in Victoria but rather mixed in other States.

In conclusion, it seemed reasonable to assume that substantial components of full-time internal enrolments in Streams 2, 3, 4 and 5 of TAFE could be regarded as equivalent to Years 11 and 12 of secondary school. However, the issue remaining was one of how to take account of the variations between States in equivalence, and the variation within States which presumably reflected different types of program within the one stream.

In Chapter 2 a procedure was outlined which enabled the construction of an index of TAFE participation equivalent to Year 11 and Year 12 in secondary school. Details of the procedure were elaborated in Appendix I. In brief, that procedure made use of data concerning students who commenced in TAFE in 1982, and established equivalence on the basis of the years of secondary school attained before entering TAFE, and the total numbers of full-time internal students 19 years of age or younger in that year. The method of calculation incorporated the contribution of commencing TAFE students and continuing TAFE students to the measures of Year 11 equivalent participation and Year 12 equivalent participation.

TAFE Equivalence and Participation

In Table 3.12 grade participation rates in secondary schools and equivalent TAFE programs have been recorded. Figures have been reported only to the nearest percentage point, as is consistent with the approximate nature of the estimation procedure. From Table 3.12 several inferences could be drawn concerning Year 11 participation rates. Across Australia, between about 5 and 6 per cent of a cohort was enrolled in full-time TAFE programs which were roughly equivalent to Year 11. If those enrolments were included, the overall grade participation rate, and the retention rate to Year 11, would have risen from about 58 per cent to about 64 per cent. Put differently, a little less than one in ten of the group in Year 11 full-time education were enrolled in TAFE. In some States the contribution of TAFE at Year 11 was greater than in others. The relative contribution of TAFE at this level appeared to have been greatest in New South Wales, Western Australia and Tasmania. As a general observation, TAFE participation at this level tended to be greater where school participation, and especially government school participation, tended to be lower. It appeared that full-time TAFE participation at this level was at least in part a substitution for school participation.

At Year 12 level, TAFE participation was also important, contributing about five percentage points to overall participation rate estimates, lifting these figures from 37 to 42 per cent. The pattern of difference between States at Year 12 level was less clear than at Year 11 level. In Victoria the role of TAFE (mainly through TOP) was greater than in other States, accounting for about one-quarter of full-time enrolments at this

Table 3.12 Estimated Grade Participation Rates in Post-compulsory Schooling Including TAFE Contribution in 1982[ab]

	Year 11				Year 12			
	Govt.	TAFE	Non-govt.	Total	Govt.	TAFE	Non-govt.	Total
Australian Capital Territory	54	5	24	83	49	4	21	74
New South Wales	29	10	14	53	22	3	12	37
Victoria	47	3	24	74	18	11	16	45
Queensland	34	6	18	58	26	2	15	42
South Australia	64	6	19	83	30	2	13	45
Western Australia	42	9	18	69	25	7	13	45
Tasmania	24	9	10	43	17	4	7	28
Australia	40	6	18	64	23	5	14	42

a See Chapter 2 for details of estimation procedures.

b Data for the Northern Territory has not been included separately but has been included in the data for Australia.

level, though in Western Australia the contribution (largely through continuing certificate course students) was also substantial. There was a negative association between equivalent TAFE participation and government school participation, even though it was not as strong as at Year 11 level.

Even though the estimation procedures used in this analysis necessarily involved a series of assumptions, the results seemed sufficiently robust to draw attention to the general pattern of relationships between post-compulsory school participation and full-time participation in equivalent TAFE programs. On the basis of these figures, if the TAFE enrolments were considered as part of the government school system, retention rates to Year 11 in those schools for 1982 would have risen from 52 per cent to 60 per cent, and retention rates to Year 12 in 1982 would have risen from 30 per cent to 37 per cent.

Growth in School and TAFE Enrolments

In examining changes in TAFE and school enrolments, the procedures used to estimate full-time enrolments in TAFE programs equivalent to Years 11 and 12 were able to be applied only to 1982 data. As an alternative, the five-year period from 1977 to 1982 was examined with reference to total enrolments in Years 11 and 12 in schools, and full-time enrolments of students 19 years and under in TAFE Streams 2 through 5. In adopting this approach, it was important to note that the TAFE data for 1977 were based on an estimated distribution of students using a sampling procedure (CTEC, 1978). Comparable data for subsequent years carry a caution about the precision of the estimates. In addition, in making comparisons between enrolments in this way it was implicitly assumed that cohort size from which each group of students was drawn had not changed appreciably.

Table 3.13 contains an indication of enrolment growth in the categories of students mentioned above. From these data it could be observed that over the five years from 1977 to 1982 there was very little growth in Year 12 enrolments (2 per cent corresponding to a rise of about 1 percentage point in apparent retention to Year 12), or in Year 11 enrolments (4 per cent corresponding to a 5 percentage point rise in apparent retention rate to Year 11), and a substantial growth in full-time TAFE enrolments of students aged 19 years or less occurred. Even though a number of caveats regarding the use of these data were noted, it does seem that growth in enrolments over the five years from 1977 to 1982 was greater in full-time TAFE programs than in school programs. An indication of the comparative changes in enrolment levels in these categories provides an important adjunct when interpreting retention rate changes over that period.

Table 3.13 Growth in School and TAFE Full-time Enrolments from 1977 to 1982

	1977	1982	Change
All schools Year 11	134 747	139 571	+3.6%
All schools Year 12	88 421	89 748	+1.5%
TAFE Streams 2-5[ab]	30 894	42 234	+37%
Number of people 15-19 years[c]	1289 521	1291 179	0.1%

a Full-time internal students aged 19 years or younger.
b Data for 1977 based on estimates from a sample (see CTEC, 1978).
c From Australian Bureau of Statistics (1983).

Sex Differences in Apparent Retention Rates

Schools

Over the decade from 1972 to 1982 there were changes in the relative retention rates for male and female students. Table 3.14 contains details on an Australia-wide basis of apparent retention rates to Year 11 and Year 12 for male and female students in government and non-government schools.

In government schools, different patterns of change were evident for male and female retention rates over the period from 1972 to 1982. For males in those schools, retention rates to Year 12 fell by an average of about 0.4 percentage points per year over that time, and for females retention rates to Year 12 grew by an average of 0.9 percentage points per year. Between 1982 and 1983, the male retention rate to Year 12 jumped by 4 percentage points and that for females increased by 3 percentage points. At the Year 11 level, the retention rate for males grew over the period 1972 to 1982 at an average of 0.2 percentage points per year. Retention rates to Year 10 in non-Catholic non-government schools had been higher for females than for males since 1978, with the difference having grown between then and 1982. Values for both males and female retention rates exceeded 100 per cent, indicating that there were some transfers into those schools which would have inflated the retention rates.

Table 3.14 Apparent Retention Rates for Male and Female Students in Government and Non-government Schools from 1972 to 1983

	To Year 11				To Year 12			
	Government		Non-government		Government		Non-government	
Year	Males	Females	Males	Females	Males	Females	Males	Females
1972	46	42	67	57	30	25	56	42
1977	46	50	67	68	28	32	58	53
1982	48	55	74	78	26	34	57	60
1983	55	59	78	81	30	37	63	63

It appeared that the patterns of change in retention rates of males and females differed between States, at least for government schools. Table 3.15 records retention rate data for the period 1972 to 1983 for males and females in the government school systems in each State. Even though changes in retention rates could be confounded by migration between States, male and female retention rates would be expected to be influenced in a similar way by that factor. Table 3.15 shows that there were differences between States in the relative changes in male and female retention rates between 1972 and 1982. The largest differences between the changes in male and female retention rates at Year 12 and Year 11 occurred in New South Wales, South Australia and the Australian Capital Territory. In New South Wales, male retention rates to Year 12 fell by one percentage point per year over that 10 year period, even though female retention rates to Year 12 rose by 0.5 percentage points per year. For South Australia, comparable relative changes were a fall of 0.2 percentage points per year for males and a rise of 1.6 percentage points per year for females. Female retention rates to Year 12 in the Australian Capital Territory rose at a similar rate to South Australia, but the rates for males rose only by 0.3 percentage points per year. Between 1982 and 1983, retention rates to Year 12 rose a little more for males than females in most but not all States. Male retention rates to Year 11 rose rather more rapidly in all States between 1982 and 1983 than did female retention rates.

In brief, it appeared that between 1982 and 1983 there was not only a general increase in retentivity but also a change in the trend of relative retention rates for males and females. Over the period from 1972 to 1982 there had been a growth in female retention rates at both Year 11 and Year 12, but either little growth (Year 11) or a slight decline (Year 12) for male retention rates. The differences between male and female retention rate changes were greater in some systems than in others. Between 1982 and 1983 these trends altered such that at Year 11 male retention rates increased rather more than did female rates, and at Year 12 male rates increased by a little more than female rates. In 1983, female retention rates to the upper years of secondary school still exceeded those for males, though the difference had narrowed in 1983.

Technical and Further Education

A previous section of the present chapter outlined the role of full-time courses in TAFE which could be considered equivalent to Year 11 and 12. Any examination of sex differences in retentivity needed to take into account the role of those programs. Even though TAFE as a whole has often been considered to have a preponderance of male enrolments, that imbalance had diminished in the years up to 1982. In 1977, 64 per cent of all enrolments in Streams 1 to 5 were male (CTEC 1978), but by 1982 the percentage of males in those streams was 59 per cent. For full-time enrolments in those streams, the sex distribution appears to have been much more evenly balanced with 47 per cent of

Table 3.15 Apparent Retention Rates for Male and Female Students in Government Schools from 1972 to 1983

	To Year 11								To Year 12							
	Males				Females				Males				Females			
	1972	1977	1982	1983	1972	1977	1982	1983	1972	1977	1982	1983	1972	1977	1982	1983
Australian Capital Territory	66	76	78	91	62	74	81	89	66	66	69	75	62	66	78	77
New South Wales	39	36	34	42	32	40	41	46	35	31	25	29	27	33	32	35
Victoria[a]	58	56	62	70	56	62	69	73	25	22	20	23	25	30	31	35
Queensland	33	39	43	52	29	41	51	58	29	23	31	36	29	33	40	44
South Australia	72	65	73	78	61	69	76	78	33	29	31	38	22	31	38	44
Western Australia	37	44	48	56	39	54	58	65	27	28	30	30	22	31	33	32
Tasmania[b]	28	24	24	31	27	33	32	36	23	24	17	20	18	25	21	25
Australia[c]	46	46	48	55	42	50	55	59	30	28	26	30	25	32	34	37

Source: Commonwealth Department of Education and Youth Affairs (1983, 1984).

a Excludes TOP enrolments in Year 12.
b Data from 1982 onward exclude part-time enrolments.
c Data exclude the Northern Territory.

Table 3.16 Percentage of 1982 Full-time Internal TAFE Enrolments 19 Years and Under who Were Female

State	Stream				Estimated equivalent[a]	
	2	3	4	5	Year 11	Year 12
Australian Capital Territory	49	4	99	32	76	58
New South Wales	59	6	97	49	64	69
Victoria	48	2	62	48	39	43
Queensland	39	10	82	46	41	41
South Australia	63	11	31	53	42	46
Western Australia	63	2	73	46	77	66
Tasmania	46	0	98	52	76	58
Northern Territory[b]	32	0	76	79	-	-
Australia	55	5	86	49	58	44

Source: Data supplied by Commonwealth Tertiary Education Commission.

a See Chapter 2 for details of estimation. This refers to the weighted average of the percentage of females in the streams contributing enrolments equivalent to the Year levels indicated.

b Represents very small numbers.

those enrolments being male in 1977, and 51 per cent being males in 1982. Within this overall picture were differences between States and streams. The present report was most concerned with full-time enrolments 19 years or under in Streams 2 to 5. In Table 3.16 the percentages of full-time internal students 19 years of age or less who were female has been recorded for each stream and State.

From Table 3.16 it can be observed that in 1982 full-time TAFE enrolments in this age range were predominantly male for Stream 3, predominantly female for Stream 4, and fairly evenly balanced for Streams 2 and 5. It was also evident that there were differences between States. Stream 2 contained a higher proportion of female students in Western Australia, South Australia and New South Wales than in other States. Stream 4 contained a large predominance of females in New South Wales, Queensland, Tasmania and the Australian Capital Territory, a smaller majority of females in Victoria and Western Australia, and a minority in South Australia. Stream 3 had very few female students, though here also there were differences between States. Stream 5 enrolments showed fewer differences between the States in sex distributions.

Table 3.16 also contains weighted averages for the percentage of females in Streams 2 to 5 in proportion to contributions of each stream to the estimates of Year 11 equivalents and Year 12 equivalents. These data showed that in the Australian Capital Territory, New South Wales, Western Australia, and Tasmania there were more females than males among these categories, but in Victoria, Queensland and South Australia the reverse was true. Across Australia, enrolments in Year 11 equivalent programs were estimated to have more females than males, but the reverse was true for Year 12

equivalent programs. Even though the data were based on estimates, it was evident that there were differences between States with lower proportions of female students in TAFE programs equivalent to Years 11 and 12 in Victoria, Queensland and South Australia than in other States.

At a national level, it has been noted that for government schools in 1982 female retention rates to Year 11 were some seven percentage points higher than male retention rates, and at Year 12 female retention rates were about eight percentage points higher than male retention rates. If TAFE enrolments in programs equivalent to Year 11 and Year 12 were considered as part of the government school sector, the effect would be to narrow that gap by about one and a half percentage points at Year 12 but to widen the gap by a similar amount at Year 11. In summary, the difference between male and female retentivity to Years 11 and 12 in 1982 could not be generally attributed to differential participation in full-time TAFE programs. Only a small part of the difference at Year 12 level could have been due to greater participation by males in full-time TAFE programs.

In 1982 there were also some differences between States in the pattern of participation in TAFE. In some States the influence of the relative participation of males and females in TAFE may have had a larger impact on differential retention rates than was observed in general. For example, in Victoria the difference between male and female retention rates to Year 12 in 1982 in government schools was some 11 percentage points. If TAFE equivalent programs were included as part of the government system, the difference would have been reduced by nearly three percentage points. This would have occurred since including appropriate TAFE enrolments would have increased male retention rates to Year 12 for males from 28 to 31 per cent, and increased that for females from 31 to about 39 per cent.

It has been noted in an earlier section that over the period from 1977 to 1982 there were changes in the relative retention rates for males and females. To place these changes in a perspective which enabled some comparison with TAFE enrolments, absolute enrolment levels for males and females in schools and full-time internal TAFE enrolments aged 19 years or younger have been recorded in Table 3.17. Because of changes in the cohort from which the students were drawn, these data did not of themselves reflect changes in retentivity or participation. In addition, the TAFE data included enrolments which might not be considered equivalent to Years 11 and 12. From the 1982 data, 35 per cent of those enrolments would have been counted as equivalent to Year 12, with the remainder not being so classified. Notwithstanding these cautions, it can be seen that for both males and females in this age bracket, full-time TAFE enrolments increased to a greater extent than did school enrolments, and that the increase was greater for males than females. On this basis, it appeared possible that at least part of the decline in apparent retention rates for males in government schools

Table 3.17 Changes in Male and Female Enrolments in School and TAFE from 1977 to 1982

	Males			Females		
	1977	1982	Change	1977	1982	Change
All schools Year 11	66 382	67 661	+0.4%	68 365	71 910	+5.2%
All schools Year 12	43 507	41 711	-4.1%	44 914	48 037	+7.0%
TAFE Streams 2-5[a]	13 634	20 354	+49%	17 260	21 880	+27%
Numbers aged 15-19 years[b]	658 782	659 422	0.1%	630 739	631 757	0.16%

[a] Full-time internal enrolments aged 19 years or younger. Data for 1977 based on estimates from a sample (see CTEC, Selected TAFE Statistics 1977, 1978).

[b] From Australian Bureau of Statistics (1983).

could have been attributed to increasing levels of participation of males in full-time TAFE programs. However, the TAFE data from 1977 was not sufficiently disaggregated to allow an estimation of the extent to which this may have occurred.

Among the possible interpretations which could be offered for the differences in the patterns of school retention for males and females, the following three seem plausible. First, it was possible that the differences reflected different patterns of employment opportunities for males and females. Secondly, it seemed possible that opportunities for study through TAFE may have contributed to the patterns observed. Thirdly, the change in the relative retention rates for males and females may have reflected rising expectations held by and for females with respect to education and career. It seemed unlikely that any one of these would have provided the sole explanation of the trends observed.

With regard to employment opportunities it did appear that over the seventies when the percentage of young people who were unemployed increased in general (from 2.1 per cent to 8.3 per cent of all those aged 15 to 19 years between 1971 and 1981), the decrease in employment opportunities was greater for females than males. More recently (since 1982) the level of unemployment for young males has worsened at a greater rate than for females, probably as a consequence of fewer apprenticeships being available (CTEC, 1982:52), and this was a factor which could have contributed to the more rapid rise in male retentivity than female retentivity between 1982 and 1983. However, inferences about the influence of unemployment need to be qualified by the observation that female retention rates had begun to grow rather earlier than the onset of high levels of youth unemployment. In general, relative employment opportunities may have contributed to the differences in retentivity growth for males and females, but this factor would not appear to provide a sufficient explanation by itself.

As detailed in previous sections of this chapter, the participation of young people in full-time TAFE programs differed between the sexes, States, and study streams. On 1982 data, it did not appear that participation in those programs could have explained the different levels of male and female retentivity at that time. Over the period 1977 to 1982, it did appear that male participation in full-time TAFE programs grew at a greater rate than did female participation in those programs. This could have contributed to the different patterns of school retentivity, but some very rough estimates suggested that the variation in rates of growth in participation in full-time TAFE programs would not have been sufficient to account for all of the difference. A further complicating factor appeared to be that between 1977 and 1982 part-time TAFE enrolments for males aged 19 years and younger grew by 16 per cent (21,000 students), and for females in the same age group enrolments grew by 64 per cent (29,000 students). It would appear that shifts in TAFE enrolment patterns may have influenced the differences between male and female retentivity growth but in ways which were complex.

Rising expectations of school and career by and for young females was a feature of changing social attitudes during the late sixties and the seventies. This may have contributed to the increase in female retentivity which was observed. It is difficult to gather data equivalent to that for unemployment levels or TAFE participation which might relate to social expectations. The argument gains support from the fact that female retention rates started to grow more rapidly than male retention rates before the sharp and differentiated upturn in youth unemployment. Moreover, in Chapters 5 and 6 of the present report, it will be noted that in 1983 female students in Years 10 and 11 gave a higher importance rating to needing Year 12 for a future career as a reason for staying at school than did males. The change in social attitudes regarding education and career for females has been substantial. It would not seem unreasonable to expect that change to have been reflected in retention rates.

In Summary

In analyses of patterns and trends in the retentivity of education systems, it has been emphasized that inferences drawn from a set of data would depend upon the ways in which indicators were defined and the comprehensiveness of the data base. As part of this chapter, and the previous chapter, the comparative advantages of different measures of retentivity have been considered. In addition, it has been argued that the exclusion of enrolments in full-time TAFE programs equivalent to Years 11 and 12 in secondary school could distort measures of retentivity. Broadly, it has been suggested that the inclusion of such enrolments in 1982 would have added about six percentage points to age-weighted participation rates at Year 11 and about five percentage points to

the figure for Year 12 across Australia. Moreover, the contribution of TAFE was not uniform in each State at either Year 11 or Year 12.

In Chapter 1 it was suggested that the factors influencing retentivity could be grouped in three categories; economic, social-psychological, and school. Evidence in the present chapter about patterns and trends in retentivity supports the view that each group of factors may have contributed to changing patterns of retentivity. Changing patterns of retentivity appeared in part to correspond to declining job opportunities for young people, particularly with regard to the comparative trends in retentivity for males and females. It was also suggested that changing expectations among young people had influenced the emerging retentivity patterns, though the evidence for this from system level data was not strong. There was indirect evidence that the type of school programs available could have influenced retentivity to Year 11. Substantial differences existed between States in retentivity to Year 11, even after allowing for the role of TAFE. A number of explanations could be offered for those differences but in this chapter it has been suggested that they reflected the type of program provided at Year 11. At Year 12, where program differences were less marked, the differences in retentivity were not so large.

CHAPTER 4

DIFFERENCES BETWEEN SCHOOLS IN RETENTIVITY

Schools within the same system differ in retentivity. As elaborated in a recent study of Victorian high schools, these differences within school systems appeared to be attributable to both out-of-school and within school factors (Ainley et al., 1984). Though the previous chapter was concerned with differences in retentivity between States and systems, the present chapter is concerned with analyses of the retentivity of schools. It commences with an examination of the extent of differences between schools in retentivity and continues with an analysis of the extent to which various factors were associated with those differences. In addition, the chapter reports on the ways in which secondary schools had responded to the needs of students now staying at school through the post-compulsory years.

Two sources of data have been used in the present chapter. The first was based on the government schools from five States which took part in the IEA Mathematics Study of 1978. The details of the sample of 134 schools with a description of the data obtained from the initial study and subsequently from official sources have been described in Chapter 2. The second source of data was the survey of schools conducted in 1983, which was also described in Chapter 2. In general, the follow-up of the IEA schools provided data about patterns in retention rates related to out of school factors, and the 1983 survey provided information about school programs developed in response to, or in conjunction with, rising retention rates.

Within State Dispersion in Retentivity

The extent of dispersion within the state systems was examined using retention rates from Year 8 to Year 11 and from Year 8 to Year 12 for the IEA samples of government schools. Table 4.1 contains descriptive statistics for retention rates from Year 8 to Year 11, and Table 4.2 contains similar data for retention rates from Year 8 to Year 12.

The means recorded for these samples differed a little from the system-wide figures recorded in Chapter 2. Across all systems the overestimates (in Queensland, South Australia, and Western Australia) balanced the underestimates (in Victoria and Tasmania), but typically the discrepancy was about four percentage points at Year 11 and two percentage points at Year 12. These discrepancies are largely attributable to the normal errors of sampling.

Dispersion in Retention Rates to Year 11

Three measures of within-state dispersion have been provided through the data in Table 4.1: the standard deviation, the interquartile range, and the range between the

Table 4.1 Within State Dispersion in Retention Rates from Year 8 to Year 11 in the IEA Sample of Government Schools

	Vic. (High)			Vic. (Tech.)			Queensland		
	1983	1982	1981	1983	1982	1981	1983	1982	1981
Mean	72	65	66	59	45	42	62	55	52
SD	11	13	13	12	8	10	15	17	15
First quartile	64	54	58	46	39	34	51	45	39
Median	71	64	65	58	46	38	58	49	49
Third quartile	77	75	77	69	48	41	72	67	59
Minimum	54	44	34	37	32	32	30	22	23
Maximum	97	89	85	79	55	58	92	91	89
Number of schools	18	18	18	8	8	8	26	26	26
	South Australia			Western Australia			Tasmania[a]		
	1983	1982	1981	1983	1982	1981	1983	1982	1981
Mean	80	78	72	67	60	58	29	23	25
SD	14	13	16	21	18	18	11	10	16
First quartile	73	67	61	52	47	46	20	16	16
Median	80	73	67	62	57	53	29	19	20
Third quartile	86	85	83	77	67	68	35	29	30
Minimum	45	51	42	35	36	33	9	8	1
Maximum	108	107	111	117	102	99	56	46	85
Number of schools	30	30	30	23	22	22	26	26	26

[a] Based on figures from Year 7 to Year 11.

maximum and minimum in the samples. The standard deviation can be interpreted as providing an indication of the range of scores on either side of the mean which would encompass approximately two-thirds of the sample: if the distribution of scores was normal approximately two-thirds of the cases would lie in that range. The average within-system standard deviation for retention rates from Year 8 to Year 11 was 14 percentage points. In other words, two-thirds of schools within any system had retention rates to Year 11 which were within about 14 percentage points on either side of the mean for the system. Though there were differences between systems, it seemed that there was an appreciable spread of school retention rates within systems.

The interquartile range is the difference between the third and first quartiles. In other words, it defines the range covering half of the schools in each sample spread about the median. On average, the interquartile range for retention rates from Year 8 to Year 11 was 18 percentage points. Notwithstanding differences between systems, it seemed that in a typical system about one-quarter of schools had retention rates more than nine percentage points below the median, and a further quarter had retention rates more than nine percentage points above the median.

Dispersion in Retention Rates to Year 12

Retention rates from Year 8 to Year 12 recorded in Table 4.2 showed a similar level of dispersion to those from Year 8 to Year 11. Even though there were differences between

Table 4.2 Within State Dispersion in Retention Rates from Year 8 to Year 12 in the IEA Sample of Government Schools

	Vic. (High)		Qld		SA		WA	
	1983	1982	1983	1982	1983	1982	1983	1982
Mean	36	33	46	40	43	37	34	31
SD	11	10	17	15	19	18	14	13
First quartile	29	24	33	28	32	26	22	19
Median	35	35	42	39	37	30	35	29
Third quartile	40	40	56	48	50	43	44	38
Minimum	14	17	18	19	10	10	13	13
Maximum	73	53	91	90	98	90	70	62
Number of schools	18	18	26	26	30	30	22	22

state systems, the average standard deviation was about 14 percentage points and the average interquartile range was 18 percentage points.

Annual Changes in Retention Rates

Individual school retention rates fluctuated from year to year. In Table 4.3, information concerning the change in school retention rates from one year to the next has been recorded for each of the school systems under review. With regard to retention rates from Year 8 to Year 11, it can be seen that there was a general modest increase (averaging 2 percentage points) between 1981 and 1982, though the change differed between systems. Within each system there was a substantial variation in the changes which occurred, with the standard deviation averaging 11 percentage points. Between 1982 and 1983 there was a larger general increase in the retention rate to Year 11, averaging about 6 percentage points, but still a substantial variation within systems with an average standard deviation of around 12 percentage points. Expressed differently, even though there was an increase in retention to Year 11 in all the systems studied between 1982 and 1983, there was in each system a significant percentage of schools for which the retention declined. This also differed for each system but, on average, around 22 per cent of the schools in any system recorded a decline in the retention rate to Year 11.

Table 4.3 also records information about changes in retention rates from Year 8 to Year 12 from 1982 to 1983 about which similar conclusions could be drawn. The general increase in retention to Year 12 was a little lower for these samples of schools than was found to be the case for the populations in Chapter 3, averaging around four percentage points. The standard deviation of this change was 10 percentage points. Again this corresponded to varying, but always substantial, percentages of schools in any system actually experiencing a decline in retention rate. On average, for the systems considered, around 28 per cent of schools recorded a decline in retention rate from Year 8 to Year 12.

Table 4.3 Annual Changes in Retention Rates from Year 8 to Year 11 and Year 8 to Year 12 in the IEA Sample of Schools

	Retention rate Year 8 to Year 11				
	Change 1981-1982		Change 1982-1983		
	Mean	SD	Mean	SD	N
Victoria (High)	-0.4	14.3	6.7	13.0	18
Victoria (Tech.)	3.3	10.0	13.5	10.2	8
Queensland	3.8	8.9	6.4	7.0	26
South Australia	5.4	11.9	2.6	8.0	30
Western Australia	2.7	6.6	8.1	14.0	22
Tasmania[a]	-2.0	16.8	6.0	8.2	26
	Retention rate Year 8 to Year 12				
			Change 1982-1983		
			Mean	SD	N
Victoria (High)			2.7	8.6	18
Victoria (Tech.)			-	-	-
Queensland			5.8	8.4	26
South Australia			6.2	8.4	30
Western Australia			3.6	3.7	22
Tasmania[a]			-	-	-

[a] Based on figures from Year 7 to Year 11.

To elaborate further the fluctuations in retention rates for schools, it is worth considering the correlation coefficients between retention rates at different years. For retention from Year 8 to Year 11 the correlation coefficients for one year to the next were 0.77 and 0.83, and for 1981 to 1983 the correlation coefficient had a value of 0.81. For retention rates to Year 12 from Year 8, the value of the correlation coefficient between the 1982 and 1983 figures was 0.87. These figures indicate that there was an underlying association between school retention rates measured on the basis of different years, but superimposed on that underlying retentivity were small annual fluctuations.

It seemed unlikely that these fluctuations would be solely due to changes in the social background of the school population. Changes in social area characteristics would usually be slower and less widespread than would explain these fluctuations. It was possible that some of the changes could be explained by school factors such as changes in curriculum, changes in organization, or changes in personnel.

If that were general, the changes might be expected to be enduring rather than transient. However, if changes in some schools resulted in the net transfer of students into the schools there would be an increase in the retention of those schools and a corresponding decline in other schools. In those circumstances an increase in the dispersion of apparent school retention rates would be expected. The data in Table 4.2 showed only a slight increase in dispersion over the years from 1981 to 1983. Another possible explanation for the fluctuations observed is that they could reflect a 'cohort

effect'. As most teachers would testify, there may be 'good years' and 'bad years' in terms of student interest, behaviour and performance. There is some research evidence to support the presence of cohort effects in elementary schools (Rowan, Bossert and Dwyer, 1983). Explanations of how such an effect might operate could possibly involve the structures and relations in peer groups which reinforce chance variations in initial aptitude and motivation.

Factors Associated with Differences in Retentivity to Year 11

It was proposed in Chapter 1 that differences between schools in retentivity could be partly attributable to the nature of the population served by the school and partly attributable to differences in school programs and policies.

The measures of retentivity used in these analyses were the retention rates from Year 8 to Year 11 for the years 1981, 1982, and 1983 calculated on July enrolment figures. In the case of Tasmania, retention rates from Year 7 to Year 11 were employed. This measure was used to indicate factors associated with the transition from the beginning of secondary school to the first of the post-compulsory years of secondary school.

Data concerning the social background characteristics of the populations entering the schools in the sample were available from the original study of 13-year-old students (Rosier, 1980). Most of these students would have been expected to reach Year 12 in 1982 had they continued through school. Data from those students were used to construct measures of average socioeconomic level and percentage of students of non-English-speaking background. Those measures would be most valid for 1982 and less valid for 1981 and 1983. However, it was assumed that the indicators would be sufficiently stable to be used also for the cohorts reaching Year 11 and Year 12 over the period 1981 to 1983. Details of the basis for these two indicators have been provided in Chapter 2. School location was a measure of how urban was the school environment. The higher the score on this 4-point scale the more urban the school environment. Once again greater detail has been provided in Chapter 2.

The Analyses

The purpose of the analyses reported in this section was to examine the extent to which between-school differences were attributable to the characteristics of the population served by the school. First, the correlation coefficients between the variables were analyzed to provide information about general patterns and trends. Secondly, a series of regression analyses were conducted using retention rates from Year 8 to Year 11 as the criteria. These enabled inferences about patterns in retention rates of the 'other things equal' type to be drawn.

Weighting. The sample of schools from which the data in these analyses were drawn contained approximately equal numbers of schools per State. For the analyses the data were weighted so as to reflect the relative size of the government school populations (the 14-year-old population was used) in each State. The sample consisted of 131 schools for which data were available (three of the 134 did not have data for retention to Year 11) but for the computation of levels of statistical significance in any analysis based on weighted data the number of degrees of freedom (or the effective sample size) would be less than this. In this analysis the effective sample size for weighted analyses at Year 11 was estimated as equivalent to an unweighted sample of 96 schools.

Statistical and substantive significance. In presenting the results of the analysis all regression and correlation coefficients have been recorded in the tables. In approaching the question of statistical significance caution has been exercised because the sample did not include all States and because of the effect of weighting as described above. There are two criteria by which one could simplify the data in such tables. One would be to examine statistical significance and comment on those coefficients which are statistically significant at a given significance level. In the tables of coefficients statistical significance levels have been indicated. The other criteria would be to use a measure of effect size to determine whether a result was substantive; a procedure which seemed more appropriate for the present analyses. For this study standardized coefficients which reached 0.1 or greater have been deemed to be substantive. In discussion we have concentrated on results which reached this value but have also referred to statistical significance. In addition coefficients larger than 0.2 were considered as representing a moderate effect size.

Patterns among Correlation Coefficients

Correlation coefficients between variables possibly related to school retention rates from Year 8 to Year 11 have been shown in Table 4.4. From those data it can be seen that these measures of retentivity were:

(a) positively associated with the socioeconomic level of the school population (i.e. the higher the socioeconomic level of the school population the higher the retention to Year 11);

(b) positively associated with the percentage of students of non-English-speaking background;

(c) positively associated with mean achievement scores for 1982 and 1981 (but this was possibly due to the association between those scores and average socioeconomic status);

Table 4.4 Correlation Coefficients, Means, and Standard Deviations for Variables Possibly Related to Retention Rates to Year 11

	Correlation coefficients									
	Non-Eng.	Location	Attitude	Maths	Words	R(11,83)	R(11,82)	R(11,81)	Mean	SD
Socioeconomic status	-.09	.00	-.03	.50	.38	.22	.30	.33	8.0	1.2
Non-English background		.27	-.02	-.14	-.11	.44	.33	.34	2.5	1.2
School location			.02	.00	.03	.17	.08	.23	3.1	1.3
Attitude to school (1978)				.00	-.15	.03	-.03	-.08	15.6	1.0
Maths achievement (1978)					.69	.13	.19	.21	28.8	5.6
Word knowledge (1978)						.13	.17	.23	22.8	2.3
Retention rate (11,8,83)							.83	.77	66.3	18.0
Retention rate (11,8,82)								.81	59.3	18.9
Retention rate (11,8,82)									57.0	18.8

Note: These data have been based on 130 schools and have been weighted in proportion to the government school population in each State. The effect of weighting was considered to produce an equivalent simple random sample of 94 schools. The critical value of the correlation coefficient at the five per cent level was 0.16.

(d) positively associated with being in an urban setting in 1981 and 1983 (though this could have been due to the association between location and the percentage of non-English-speaking students in the school); and

(e) not associated with students' attitudes to school at the beginning of their secondary schooling.

Over the period 1981 to 1983 the strength of association with average socioeconomic status (and the associated average achievement levels) diminished. This result could give some support to the suggestion that not only had retention rates changed but that patterns of retention could have changed also in recent times.

Regression Analyses

The regression analyses which were used amounted to extended analyses of relevant parts of the correlation matrix described above. The regression analyses used the retention rate measures as criteria, and the indicators of the social environment as predictors. This form of analysis permitted inferences of the 'other things equal' type to be drawn. In other words, instead of a simple examination of raw correlation coefficients it was possible to obtain data which allowed inferences to be drawn, for example, about the strength of the relation between average socioeconomic level and school retention rate, holding constant the effect of the percentage of students of non-English-speaking background and location.

In the analyses, attitude to school was omitted because it was not associated with the retention rates under consideration. Of the two achievement measures, the word knowledge scores were used rather than the mathematics test scores because the two were strongly associated with each other and the former was less strongly associated with average socioeconomic status. In addition, word knowledge was considered to be a more general achievement measure.

Three sets of regression analyses were conducted. The first involved as independent variables the three indicators of the social environment of the school: average socioeconomic status, the percentage of students of a non-English-speaking background, and the school location. The second set of analyses included these variables and a set of dummy variables representing the school system of which the school formed part. The reference system was the Victorian high school system, so that the reported results were relative to that group of schools. This set of analyses enabled statistical allowance to be made for the possibility that the associations reported in the correlation matrix were partly due to the distribution of social characteristics between States. For example, an association between the percentage of non-English-speaking students and retention rate could have been partly a consequence of the States with more students of this type also having higher retention rates. In the third set of analyses, the

Table 4.5 Regression Analyses of Retention Rates to Year 11 against Social Characteristics of the School Population

Independent variables	Dependent variables - Retention rate to Year 11					
	1983		1982		1981	
	Metric coefficient	Standard. coefficient	Metric coefficient	Standard. coefficient	Metric coefficient	Standard. coefficient
Socioeconomic status	3.9	.26	5.1	.33	5.5	.36
Non-English background	6.7	.45	5.8	.37	5.2	.33
School location	0.7	.05	-.4	-.02	2.1	.14
Multiple R		.51		.47		.51
R Variance		26		22		26

Note: These data have been based on a weighted sample of 130 schools which would be equivalent to a simple random sample of 94 schools. Coefficients significant at the five per cent level have been underlined.

achievement measure based on the word knowledge test was included as a mediating variable between those concerned with social characteristics and system and the criteria. This enabled a test of whether the effect of socioeconomic status was a direct effect or whether it was transmitted through achievement.

Retention and Social Characteristics

Results of regression analysis against the three indicators have been shown in Table 4.5. From those data it can be inferred that differences in the social background characteristics of the school population accounted for between one-fifth and one-quarter of the variance in retention to Year 11. Other things equal, retention to Year 11 was higher in schools with students of higher socioeconomic background on entry, and retention was higher in schools with a larger percentage of students of a non-English-speaking background in their entry population. Only in 1981 was any substantive association between school retention rates to Year 11 and location observed and then the association was not statistically significant at even the ten percent level.

Retention, Social Characteristics and System Differences

Results of the regression of retention rates to Year 11 against social characteristics and system have been recorded in Table 4.6. This combination of variables accounted for about half of the variance in retention to Year 11. Comparing these results with those reported in Table 4.5 suggests that the inclusion of the system variables accounted for a further 25 to 30 per cent of the variance in retention to Year 11 beyond what had been accounted for by the social characteristics alone. The results of Table 4.6 also showed that socioeconomic level was positively associated with retention to Year 11, after controlling for system effects. In addition, the percentage of students of non-English-speaking background was positively associated for retention to Year 11, after controlling for system effects, in 1983. In 1982 the association was positive but statistically significant at the 10 per cent level and in 1981 the association was positive but not statistically significant. After controlling for the effect of system differences there was no association between retention to Year 11 and location in 1983 or 1982 though there was an effect in 1981.

Retention, Achievement, Social Characteristics and System Differences

Results of the regression analyses which included average scores on the word knowledge test as a measure of achievement at the beginning of secondary school have been shown in Table 4.7. Word knowledge was treated as one of the independent variables in analyzing retention rates and as a dependent variable in relation to the social and system variables. Inclusion of this measure of average achievement added almost nothing to the explanation provided by the other variables. Average scores were not associated with

Table 4.6 Regression Analyses of Retention Rate to Year 11 against Social Characteristics and School System

	Dependent variables - Retention rate to Year 11					
	1983		1982		1981	
Independent variables	Metric coefficient	Standard. coefficient	Metric coefficient	Standard. coefficient	Metric coefficient	Standard. coefficient
Socioeconomic status	2.9	.20	3.7	.24	4.0	.26
Non-English background	4.1	.27	2.4	.15[a]	1.7	.11
School location	0.5	.03	-.3	-.02	2.5	.17
System: Technical	-8.1	-.15	-15.0	-.27	-19.5	-.35
Queensland	-6.1	-.15	-7.1[a]	-.16[a]	-12.1	-.28
South Australia	7.8[a]	.16[a]	13.0	.25	7.2	.14
Western Australia	-3.4	-.06	-4.7	-.08	-8.7	-.15[a]
Tasmania	-35.5	-.45	-37.0	-.45	-33.7	-.41
Multiple R		.70		.73		.73
% Variance		50		53		54

Note: These data have been based on a weighted sample of 130 schools which would be equivalent to a simple random sample of 94 schools. Coefficients significant at the five per cent level have been underlined.

[a] Designates a coefficient significant at the 10 per cent level which would have shown as significant at the five per cent level had a correction for the effect of weighting not been applied.

Table 4.7 Regression Analyses of Retention Rate to Year 11 against Social Characteristics, School System, and Mean Achievement at Age 13

	Dependent variables							
	Retention rate to Year 11							
	1983		1982		1981		Word knowledge test	
Independent variables	Metric coefficient	Standard. coefficient	Metric coefficient	Standard. coefficient	Metric coefficient	Standard. coefficient	Metric coefficient	Standard. coefficient
Socioeconomic status	**2.5**	**.17**	**3.7**	**.24**	**3.7**	**.24**	**.49**	**.26**
Non-English background	**4.3**	**.28**	2.4	.15[a]	1.8	.12	-.24	-.13
School location	0.4	.3	-.3	-.02	2.4	.16	.15	.08
System: Tech.	**-5.8**	-.11	**-14.6**	**-.26**	**-17.4**	**-.31**	-3.2	**-.46**
Qld	-6.7	-.16	-7.2	-.16[a]	**-12.7**	**-.29**	.7	.14
SA	7.7	.16[a]	**12.9**	**.25**	7.1	.14	.2	.03
WA	-4.2	-.08	-4.9	-.09	**-9.6**	**-.17**	1.2	.17
Tas.	**-35.6**	**-.46**	**-37.1**	**-.45**	**-33.9**	**-.42**	.2	.02
Word knowledge	0.7	.09	0.1	.01	.6	.08		
Multiple R		.71		.73		.73		.67
% Variance		50		54		54		45

Note: These data have been based on a weighted sample of 130 schools which would be equivalent to a simple random sample of 94 schools. Coefficients significant at the five per cent level have been printed in bold typeface.

a Designates a coefficient significant at the 10 per cent level which would have shown as significant at the five per cent level had a correction for the effect of weighting not been applied.

retention rates to Year 11 after allowance was made for the effect of other variables in the analyses. There was an association between socioeconomic level and the average word knowledge test score but this was not transmitted to the retention rates involved. There were also some state differences in word knowledge test scores which were not transmitted to effects on retention rates to Year 11. In brief, inclusion of this measure of average achievement in the analysis added almost nothing to an understanding of factors associated with retention to Year 11. A similar result was found when mathematics test scores were included instead of word knowledge test scores.

The Regression Analyses: An Interpretation

The results of the regression analyses of retention rates to Year 11 suggested that those retention rates were associated both with the social characteristics of school intake populations and with the system in which the school was located. In terms of the intake population, it was found that schools serving student groups of higher socioeconomic background had higher retention rates to Year 11. Such a result was not surprising, in that it was consistent with other educational research reviewed in Chapter 1. The association between socioeconomic background and retentivity has usually been interpreted as occurring either as a result of differences in the financial support available to students, or differences in the educational resources provided, or differences in the educational aspirations generated at home. In the present study of school retention rates and socioeconomic level, it was noted that the strength of the association tended to decline between 1982 and 1983. Such a result could arise from more students of lower socioeconomic backgrounds remaining at school to Year 11 either in addition to, or possibly partly at the expense of students from higher socioeconomic backgrounds. The difference in the size of the regression coefficients was small and not statistically significant but the tendency for a change in this direction seemed worth noting.

For 1983 there was a moderate and statistically significant association between the percentage of students of a non-English-speaking background and retention rates to Year 11. In 1982 the association was positive and significant at a level between the five and ten per cent criteria. In 1982 and 1981 the association was positive but not statistically significant. The existence of such a relationship was supported by the observation of its pressure across all three years studied. Since the analyses were conducted with the school as the unit of analysis, it does not necessarily follow from this that students of non-English-speaking background were more likely to remain at school to Year 11. However, such an interpretation would be consistent both with the result observed and with the results of research conducted at the student level (e.g. Williams et al., 1979). This view has often been elaborated in terms of a higher commitment to education on the part of those from migrant families of a non-English-speaking background (see Williams et al., 1980).

The effects of school location were noticeable only for 1981, for which year it appeared that retention rates to Year 11 were higher in schools within a more urban setting. As part of a study of Victorian high schools, fluctuations in the effect of location on retentivity were noted and it was postulated that this could have reflected variations in farming activity.

Differences observed between systems as represented by the coefficients for the dummy variables remained after making statistical allowance for any effect of systematic differences in social characteristics. The magnitude of the net difference between each system and Victorian high schools is given in percentage points by the metric coefficients. Hence, for example in 1983 South Australian high schools had retention rates from Year 8 to Year 11 some 8 percentage points higher than Victorian high schools, other things equal. Similarly in 1983 Queensland schools had retention rates from Year 8 to Year 11 some 7 percentage points lower than Victorian high schools. On the basis of these analyses, it could be inferred that the differences between state systems discussed in Chapter 3 probably arose from factors other than differences in the social and demographic characteristics of the States.

Any interpretation of net differences between state systems is somewhat tentative. Differences between Victorian high and technical schools could arise because of differences in the educational expectations of those enrolling in each type of school. The decline in the size of that difference could then reflect changing types of expectation among students, and/or changes in employment opportunities which might have had an impact on technical school students to a greater extent than high school students. As many students from technical schools had previously entered apprenticeships, the decline in the availability of apprenticeships over recent years could have influenced retention rates in those schools to a greater extent than in high schools.

The enduring differences between retention rates to Year 11 in Victorian high schools and those in other States could not be attributed so readily to different expectations of students. Those differences could have arisen because of differences in employment opportunities for young people, or because of differences in the nature of the programs provided, or a combination of these factors. Given that the net differences did not mirror patterns of youth unemployment between States, it seems possible that school programs could have played some role in explaining these differences.

Retentivity to Year 12

Two measures of retentivity to Year 12 were used in an examination of factors related to differences between schools at that level. The first was the retention rate from Year 8 to Year 12. This was used as a measure of retentivity in 1983 and 1982, and provided an indicator of the apparent holding power from near the first year of secondary school

Table 4.8 Correlation Coefficients Means and Standard Deviations for Variables Possibly Related to Retention Rates to Year 12

	Correlation coefficients											
	Non-Eng.	Loc.	Att.	Maths	Words	Rtn (12,8,83)	Rtn (12,8,82)	Rtn (12,10,83)	Rtn (12,10,82)	Rtn (12,10,81)	Mean	SD
Socioeconomic status	-.07	-.06	-.03	.46	.32	.29	.37	.31	.33	.34	8.1	1.2
Non-English background		.28	.01	-.27	-.19	.15	.12	.19	.16	.15	2.6	1.2
School location			.06	.01	.13	.14	.26	.16	.18	.18	3.1	1 3
Attitude to school (1978)				.01	-.15	.03	.05	.03	.04	.08	15.6	1.0
Maths achievement (1978)					.58	.30	.41	.29	.35	.33	30.0	5.0
Word knowledge (1978)						.11	.25	.12	.21	.15	23.3	2.0
Retention rate (12,8,83)							.87	.96	.84	.83	39.0	15.2
Retention rate (12,8,82)								.86	.95	.89	35.6	14.0
Retention rate (12,10,83)									.88	.82	41.9	15.0
Retention rate (12,10,82)										.88	38.7	13.9
Retention rate (12,10,81)											36.5	12.6

Note: These data have been based on 96 schools weighted in proportion to the government school population in each State. The effect of weighting was estimated to produce an equivalent simple random sample of 81 schools. The critical value of the correlation coefficient at the five per cent level was 0.18.

to the final year. The second was the retention rate from Year 10 to Year 12, which provided a measure of the propensity of schools to retain students from the last of the compulsory years through the post-compulsory years. This was used as a measure of retentivity over the three years from 1981 to 1983. The first of these two measures had the advantage of the cohort size being taken from the first or second year of secondary school before any losses from early school leaving had occurred. The second of the measures had the advantage of being specifically focused on the period of concern to the study, of being less affected by noise resulting from transfers and other factors, and of being able to be calculated for a longer period of time from the data available. In a section below, comment has been made about the small differences which resulted from the use of the two sets of measures.

In presenting the results of the analyses of associations between social factors and the measures of retentivity, a little less detail has been provided than for retention rates to Year 11. Two main sets of results have been presented in Tables 4.8 and 4.9. These are the correlation coefficients between relevant variables and the results of a series of regression analyses.

The data for analyses of retention rates to Year 12 have been based on a smaller sample than were the data for the Year 11 analyses. In the Year 12 analyses there were no data from Victorian technical schools and none available for Tasmania. The analyses were therefore based on 96 schools drawn from four education systems: Victorian high schools, Queensland, South Australia and Western Australia. As with Year 11, data were weighted to reflect differences in government school populations between state systems. The result of weighting was to reduce the effect sample size from 96 to 81 schools.

Correlations between Variables

Correlation coefficients between several indicators of the social composition of the school population, and the retention rates to Year 12 which were described above, have been recorded in Table 4.8. It can be noted that retention rates from Year 10 to Year 12 correlated highly with retention rates from Year 8 to Year 12 ($r = 0.96$ for 1983 and $r = 0.95$ for 1982). It can also be seen that the correlation coefficients between the corresponding retention rates for successive cohorts were around 0.86 to 0.89. In brief, there was some fluctuation in the retention rates to Year 12 similar to that for retention rates to Year 11.

From the data in Table 4.8, it can be seen that there was a positive correlation between average socioeconomic status and retention rates to Year 12, but this was a little less strong in 1983 than in 1982 or 1981. As for the Year 11 analysis, this association paralleled that between retention rate measures and average achievement at age 13 years. In such a situation, the correlation coefficients do not enable any

Table 4.9 Regression Analyses of Retention Rates to Year 12 against Social Characteristics and School System

Independent variables	Dependent variables											
	R(12,10,83)		R(12,10,82)		R(12,10,81)		R(12,8,83)		R(12,8,82)		Word knowledge	
	Metric	Standard	Metric	Standard	Metric	Standard	Metric	Standard	Metric	Standard	Metric	Standard
Socioeconomic status	**4.5**	**.35**	**3.9**	**.30**	**4.0**	**.38**	**4.7**	**.33**	**4.5**	**.38**	**.5**	**.31**
Non-English background	**2.4**	**.26**	2.4	.21[a]	2.1	.20[a]	**3.3**	**.25**	2.0	.17	-.3	-.17
School location	1.3	.11	1.5	.14	1.5	.15	1.1	.09	**2.4**	**.21**	.3	.18[a]
System: Queensland	**7.7**	**.23**	**4.5**	**.15**	**7.1**	**.26**	**13.4**	**.39**	**8.3**	**.27**	.7	.16
South Australia	3.9	.30	1.8	.05	4.9	.16	7.1	.18	4.0	.11	.2	.04
Western Australia	**-7.5**	**-.18**	**-8.8**	**-.24**	-3.3	-.09	**-1.8**	**-.04**	**-4.4**	**-.11**	**1.2**	**.23**
Word knowledge	.5	.06	1.1	.15	.3	.05	.07	.01	.9	.12		
Multiple R		.52		.53		.50		.52		.57		.47
% Variance		27		28		25		27		32		.22
N (Weighted)		106		106		106		106		106		106
Excluding system variables and word knowledge												
Multiple R		.40		.41		.40		.36		.46		
% Variance		16		17		16		13		22		
Excluding word knowledge												
Multiple R		.52		.51		.50		.52		.56		
% Variance		27		26		25		27		31		

Note: These data have been based on a weighted sample of 96 schools which would be equivalent to a simple random sample of 81 schools. Coefficients significant at the five per cent level have been printed in bold typeface.

a Designates a coefficient significant at the 10 per cent level which would have shown as significant at the five per cent level had a correction for weighting not been made.

inferences to be drawn regarding which factor is the main cause of the observed association. The raw association between the percentage of students of non-English-speaking background and retention to Year 12 was positive and of moderate size but not statistically significant at the five per cent level. This association was weaker than had been the case at Year 11, partly because there were smaller differences between States at Year 12 level which might have been linked to differences in the ethnic background of the school population. There was a small positive association between the urban nature of the school location and retention. Average scores on the attitude scale were not associated with retention rates, but those on the word knowledge and mathematics tests were associated with this measure. Because some of the independent variables were themselves interrelated, a more appropriate form of analysis was multiple regression analysis.

The Regression Analyses

The major set of analyses reported in Table 4.9 involved regression of five retentivity measures against indicators of social characteristics of the school population, the school system in which the school was located, and mean word knowledge test scores at age 13 years. In addition, summary data has been shown to indicate the effect of excluding the school means on the achievement test, and the dummy variables representing the school system.

Excluding word knowledge test scores had little effect on the percentage of variance in retention rates to Year 12 which could be explained. As can be seen from Table 4.9, mean scores on the word knowledge test were associated with retention rates to Year 12 in 1982 but the coefficient was not statistically significant. Its exclusion from the analyses would have resulted in a small decrease in the magnitude of the coefficients associated with the proportion of students of a non-English-speaking background.

Excluding both word knowledge test scores and the dummy variables representing school system had some effect on the percentage of variance in retention rates which could be explained. For this reason it was important to base inferences about the relations between social characteristics of schools and retention rates after statistically controlling for the effect of the system in which the school was located.

Socioeconomic status. The data in Table 4.9 confirmed the proposition suggested as a result of the review of literature in Chapter 1. Other things equal, there was a consistent positive association between the average socioeconomic level of a school's population and the retention rates from Year 8 to Year 12, or from Year 10 to Year 12. Compared with the data reported in Table 4.7 for retention rates to Year 11, this association appeared stronger than at Year 11. There was no strong evidence in the data

for Year 12 retention of a shift in the strength of the association with average socioeconomic level between 1982 and 1983. These data do not allow any unravelling of the extent to which such an association might have arisen from different expectations of students, different levels of parental encouragement, or differences in the capacity of families to support further study. In subsequent chapters these issues will be addressed using data gathered from students.

Ethnic composition. Other things equal, there was a positive association between the proportion of students of non-English-speaking background entering a school and the retention rates from Year 10 to Year 12. The same relationship held for retention rates from Year 8 to Year 12. Even though the coefficients just failed to reach statistical significance in 1982 and 1981 the values were moderate and consistent in direction and magnitude. It also appeared that the strength of this association had increased a little in 1983 compared to 1981 (though the difference between the coefficients was not statistically significant). Even though this result was not in accord with many commonly held beliefs it was consistent with the results of other research reviewed in Chapter 1.

Location. The location of a school as classified on an urban to rural scale did not appear to be systematically associated with retention rates to Year 12 after statistically controlling for other factors associated with differences in location (e.g. socioeconomic status and ethnic composition). Only for retention from Year 8 to Year 12 in 1982 was there any appreciable association, which may have reflected some early school leaving from that cohort in rural locations. This result was consistent with the findings of many Australia-wide studies, though it has appeared that location effects could be present in some States rather than others.

System differences. The metric coefficients associated with the dummy variables for system indicate the net difference between the retention rate for that system and the retention rate for Victorian high schools. Though very few of these coefficients were statistically significant it did appear that Queensland secondary schools had higher retention rates to Year 12 than Victorian high schools. Moreover, this effect was greater for retention from Year 8 to Year 12 than for retention from Year 10 to Year 12. That could partly reflect a higher loss from the lower years of Victorian high schools possibly associated with transfers to the non-government sector, and partly the net migration to Queensland from other States which would have a cumulative effect of the five years in secondary school for each cohort.

Measures of retentivity. In these analyses, two measures of retentivity to Year 12 were used. The first was the retention rate from Year 8 to Year 12 and the second was the retention rate from Year 10 to Year 12. It was considered that each had advantages and disadvantages as a measure of retentivity. In practice, the data in Table 4.9

suggested few differences in the patterns of relationships which emerged from use of each of the measures.

Schools in 1983: General Curriculum Patterns

As part of the 1983 survey of schools and students, one section of the school questionnaire asked about the subjects offered at Years 11 and 12, the weekly time allocation to each subject, and the number of students enrolled in each subject. These data enabled a collated representation of the school curriculum at Year 11 and Year 12. The procedures adopted were not appropriate for the secondary colleges of the Australian Capital Territory and Tasmania and so the derived statistics apply only to Victoria, Queensland, South Australia and Western Australia. Subsequently comment will not be made regarding the curriculum in systems operating senior colleges. In the four systems from which it was appropriate to derive comparable curriculum statistics, the target sample of schools was 121. For 115 of these schools (that is, 95 per cent) sufficient data were provided to enable curriculum statistics to be calculated. Some of these schools did not offer subjects at Year 12 so that the curriculum statistics at that year level were based on 105 schools (or 87 per cent of the target sample).

Each subject listed at each of the year levels was classified as representing one of ten categories.

1 English or English as a Second Language
2 Literature and Languages (including Journalism)
3 Mathematics (including Computer Studies)
4 Sciences (including Biology, Chemistry, Physics)
5 Arts (including Art, Craft, Music, Media, Drama)
6 Business and Commerce (including Accountancy, Business Mathematics, Secretarial Studies, Typing)
7 Technical Studies (including Graphics)
8 Social Sciences (including Social Studies, Economics, Politics, Legal Studies, Human Development and Society, Geography, History, Psychology)
9 Physical Education, Outdoor Education, Driver Education, and Health Education
10 Work Experience, Community Service, Social Development, and Career Education.

For each school the number of subjects offered in each category was computed, and the average enrolment per subject was calculated for each category together with the average weekly time allocation per subject. Subjects recorded as correspondence, or taken at a Saturday morning class, were not included in the calculations so that the curriculum statistics probably slightly underestimate the range of studies available in the language area (category 2) and, because of the way music was provided, in the arts area (category 5).

Table 4.10 Curriculum Statistics for Year 12 in Secondary Schools

Subject area	Statistic	Five systems (unweighted)	Vic. (High)	Vic. (Tech.)[a]	Qld	SA	WA
1 English or ESL	Average no. subjects[b]	1.3(100)	1.4(100)	1.2(100)	1.0(100)	1.6(100)	1.1(100)
	Average enrolments	54	42	30	86	31	61
	Average time allocation[c]	239	247	258	216	248	244
2 Literature and language	Average no. subjects[b]	1.4(76)	1.0(82)	0(-)	1.3(74)	1.9(73)	1.7(91)
	Average enrolments	9	9	-	6	7	12
	Average time allocation[c]	236	245	-	205	253	239
3 Mathematics	Average no. subjects[b]	3.1(100)	2.8(100)	3.0(100)	2.8(100)	2.8(100)	4.3(100)
	Average enrolments	22	13	12	35	20	19
	Average time allocation[c]	248	251	214	207	301	240
4 Sciences	Average no. subjects[b]	3.6(99)	3.0(100)	2.0(80)	3.7(100)	3.7(100)	4.5(100)
	Average enrolments	22	15	10	30	21	25
	Average time allocation[c]	236	251	234	206	248	242
5 Arts	Average no. subjects[b]	1.8(90)	1.0(68)	1.8(80)	2.0(96)	2.6(96)	1.6(100)
	Average enrolments	10	7	9	15	8	10
	Average time allocation[c]	230	247	168	205	241	242
6 Business and commerce	Average no. subjects[b]	1.6(86)	1.4(100)	2.6(80)	2.1(96)	1.2(58)	1.6(91)
	Average enrolments	13	10	14	16	13	12
	Average time allocation[c]	239	250	237	206	271	244
7 Technical	Average no. subjects[b]	1.3(69)	0.3(28)	3.4(100)	1.9(96)	0.6(50)	1.9(95)
	Average enrolments	11	6	14	13	15	6
	Average time allocation[c]	240	260	227	203	301	244
8 Social science	Average no. subjects[b]	4.6(99)	5.0(100)	3.4(80)	4.7(100)	4.5(100)	4.3(100)
	Average enrolments	17	14	12	19	17	19
	Average time allocation[c]	235	249	231	207	244	243
9 Physical education etc.	Average no. subjects[b]	0.5(43)	0.3(28)	0.8(60)	1.0(81)	0.5(42)	0.1(9)
	Average enrolments	26	12	11	35	21	43
	Average time allocation[c]	145	254	60	200	152	240
10 Work experience etc.	Average no. subjects	.1(6)	0(-)	0.4(20)	.1(11)	0.1(8)	0(-)
	Average enrolments	37	-	12	63	11	-
	Average time allocation[c]	145	-	60	150	180	-
Average total subjects		19	16	19	21	19	21

[a] Only five schools offered Year 12 studies of the 11 schools from which curriculum data were available.
[b] The figures in brackets indicate the percentage of schools offering at least one subject in the category.
[c] Minutes per week.

The tables containing statistics relating to the school curriculum were derived from samples in which each school was selected with a probability proportional to its size. This means that the samples represented schools as they served students rather than schools per se. This is an important point for the interpretation of the results. For example, when the mean number of subjects at Year 11 has been cited as 23, this strictly means that the average student in Year 11 would be in a school which offered 23 subjects. Because of the distribution of school size within each system, this does not imply that the mean number of subjects at Year 11 based on schools would be 23. In practice it would be expected to be lower than this.

The Year 12 Curriculum

Statistics relating to the Year 12 curriculum have been recorded in Table 4.10 as the average number of subjects in each category, the average enrolments per subject, and the average weekly time allocation per subject. In addition, the percentage of schools offering at least one subject per category has been shown. Overall, for the five systems considered, an average of 19 subjects was offered at Year 12. It was universal, or almost universal, for schools to offer at least one subject from the categories designated as English, mathematics, sciences, and social sciences. Based on the mean number of subjects per category, it appeared that typically schools offered one English subject (though in some States alternative forms of English were mentioned), three mathematics subjects, three to four sciences, and four to five social sciences. Average enrolments per subject in these categories ranged from 54 in English, through 22 in mathematics and in the sciences, to 17 in the social sciences. An index of the participation by students in subject areas could be obtained by calculating a ratio of the average total enrolments in each subject area to the average enrolments in English, on the assumption that an English subject would be nearly universal for students at Year 12. On this basis, the participation ratio for mathematics would be 1.0, that for the sciences would be 1.1, and that for the social sciences would be 1.1.

It was common for schools to offer at least one subject from the arts category (90 per cent) and from the business and commerce field (86 per cent). In these categories, the mean numbers of subjects offered were 1.8 and 1.6 respectively, with average enrolments per subject of 10 and 13. The participation ratios as defined above were 0.26 and 0.3 indicating that subjects in these areas were less commonly studied than those mentioned in the paragraph above.

Literature and language subjects were available in about three-quarters of the schools, technical subjects in just over two-thirds of schools, and the grouping classified with physical education in fewer than half the schools. The mean number of subjects offered in these three categories were 1.4, 1.3 and 0.5 respectively, with average

Table 4.11 Curriculum Statistics for Year 11 in Secondary Schools

Subject area	Statistic	Five systems (unweighted)	Vic. (High)	Vic. (Tech.)	Qld	SA	WA
1 English or ESL	Average no. subjects[a]	1.2(100)	1.3(100)	1.2(100)	1.1(100)	1.3(100)	1.2(100)
	Average enrolments	94	81	75	115	110	75
	Average time allocation[b]	227	238	222	215	221	236
2 Literature and language	Average no. subjects[a]	1.4(70)	1.2(69)	0.2(18)	1.3(74)	1.8(73)	1.8(77)
	Average enrolments	10	11	22	6	8	13
	Average time allocation[b]	221	219	190	205	225	237
3 Mathematics (including computers)	Average no. subjects[a]	3.4(100)	3.4(100)	3.0(100)	3.0(100)	3.4(100)	4.2(100)
	Average enrolments	37	32	32	48	42	27
	Average time allocation[b]	230	225	232	206	248	240
4 Sciences	Average no. subjects[a]	3.9(100)	3.2(100)	4.3(100)	3.8(100)	4.2(100)	4.5(100)
	Average enrolments	32	26	23	38	37	31
	Average time allocation[b]	223	233	208	205	222	239
5 Arts	Average no. subjects[a]	2.6(96)	2.2(96)	3.6(100)	2.2(96)	3.3(96)	2.0(96)
	Average enrolments	18	16	19	23	17	16
	Average time allocation[b]	218	232	186	205	213	239
6 Business and commercial	Average no. subjects[a]	2.5(95)	2.5(100)	2.1(82)	2.3(100)	3.3(92)	2.0(92)
	Average enrolments	22	23	17	25	18	22
	Average time allocation[b]	222	230	183	207	229	238
7 Technical (including graphics)	Average no. subjects[a]	2.6(88)	0.9(62)	7.5(100)	2.5(96)	2.6(92)	2.1(96)
	Average enrolments	20	16	22	20	30	13
	Average time allocation[b]	220	216	183	207	232	242
8 Social science	Average no. subjects[a]	4.5(99)	5.1(100)	2.1(91)	5.0(100)	5.0(100)	4.1(100)
	Average enrolments	28	26	32	25	30	29
	Average time allocation[b]	217	226	185	206	211	238
9 Physical education	Average no. subjects[a]	0.9(65)	0.9(77)	1.4(82)	1.1(85)	1.0(77)	0.1(8)
	Average enrolments	42	23	44	47	52	61
	Average time allocation[b]	157	222	135	200	161	110
10 Work experience Commonwealth Service	Average no. subjects[a]	0.1(11)	0.04(4)	0.3(27)	0.1(15)	0.3(19)	0.04(4)
	Average enrolments	38	36	8	75	28	27
	Average time allocation[b]	157	200	177	142	125	240
Average total subjects		23	21	26	22	26	22

[a] The figures in brackets refer to the percentage of schools offering at least one subject in the category.
[b] Minutes per week.

enrolments per subject of 9, 11 and 26. The participation ratios were accordingly low for these categories of subjects.

Subjects involving the category designated as work experience, community involvement, or career education were not generally available at Year 12. Only six per cent of schools reported these as being available, and even there the average time allocation was rather less than that given to other subjects.

The statistics recorded in Table 4.10 also showed some differences between systems. There were differences in the numbers of subjects available at Year 12 ranging from an average of 16 in Victoria to 21 in Queensland and Western Australia. However there were differences between the systems in terms of the number of subjects students were required to study. In terms of subject categories there appeared to be some differences in emphasis. More subjects in the categories of mathematics and science appeared to be taught in Western Australian schools than in Victorian schools (either high or technical schools). Conversely, Victorian high schools appeared to offer more subjects in the social sciences, though Victorian technical schools had fewer subjects in this category than schools from other systems. Arts subjects appeared to be more widely offered in South Australia than elsewhere. Technical subjects were noticeably absent from the Year 12 curriculum of Victorian high schools compared to other systems, being offered by fewer than one-third of those schools. That such studies were universally offered by the technical schools in that State would probably not have compensated, since at the time of the study only a minority of technical schools offered Year 12.

In addition to giving details of subjects taught at Year 12, schools were also invited to indicate whether an 'alternative course' was available. Interpreting the responses to this question was difficult, as what was meant by 'alternative' was not always clear (see Campbell and McMeniman, 1984). Just over one-third of the responding schools (34 per cent) indicated that an 'alternative' program was offered at Year 12, though there were differences between States. A little over two-thirds of South Australian schools indicated that these programs were available. It seemed that this could have referred to the availability of non-Public Examination Board subjects leading to the Secondary Schools Certificate. In the other systems, the figures were lower, with alternative programs at Year 12 being indicated by around one-quarter of Western Australian schools, and around one in six Victorian high schools and Queensland secondary schools. There were too few Victorian technical schools with Year 12 to make any generalization from the data.

The Year 11 Curriculum

Data describing Year 11 curriculum patterns have been recorded in Table 4.11. These data show that a few more subjects were available than at Year 12, with an average of 23 subjects being available at Year 11. However, in some systems students were

required to attempt more subjects at Year 11 than at Year 12 so this does not necessarily reflect a wider range of choice available to students. Again there were differences between systems, with the average number of Year 11 subjects per school ranging from 21 in Victorian high schools to 26 in South Australian schools and Victorian technical schools.

Among the responding schools, it was universal or nearly universal to offer at least one subject from the categories of English, mathematics, science, and social science. The means of the number of subjects offered in each of these categories were 1.2, 3.4, 3.9 and 4.5, with corresponding average enrolments per subject of 94, 37, 32, and 28. Subjects in these categories appeared to receive similar weekly time allocations.

It was very common for schools to offer at least one subject at Year 11 from the arts (96 per cent), business and commerce (95 per cent), and technical studies (88 per cent), with typically an average of 2.5 or 2.6 subjects being offered in these areas. The average subject enrolment in the arts was 18, in business and commerce 22, and in technical studies 20. The weekly time allocations appeared to be similar to those for subjects in the first mentioned categories.

Subjects from the categories languages and literature, and physical education were offered in a majority of schools (70 and 65 per cent respectively), but only an average of one such subject was offered (1.4 for language and 0.9 for physical education). The average subject enrolment in the language area was low at 10 students, but it was high (at 42) in the physical education group of subjects.

Only a minority (11 per cent) of schools offered any studies in the work experience or community service category at Year 11, though where this was offered the enrolment level was relatively high at 38.

As for the Year 12 data described previously, there were some differences between States. Western Australian schools offered more mathematics subjects than those in other States and Victorian high schools offered fewer science subjects. More arts subjects were offered in Victorian technical schools and South Australian secondary schools than in the schools of other States. As would be expected, Victorian technical schools offered a wider range of technical subjects at this level than was generally the case in other systems, with Victorian high schools offering fewer of these subjects (only 62 per cent offered any subjects in this area). On the other hand, Victorian technical schools offered fewer subjects in the social sciences. Work experience at Year 11 was present in a few schools in the Victorian technical system, in South Australia, and in Queensland. It was hardly reported at all in Victorian high schools or in Western Australia.

Just over one-third of the schools with valid Year 11 data indicated that an alternative Year 11 was offered. This was most common in the responses from Western Australian schools (67 per cent said they did offer such a program), moderately common

in South Australia (42 per cent) and Queensland (32 per cent), and least common in Victoria (eight per cent of high schools, nine per cent of technical schools). These data probably point as much to the extent to which a program is specially designated as 'alternative' as to the breadth of what was available.

In Summary

The information about school programs at Year 11 and Year 12 showed that more subjects were offered at Year 11 than Year 12 but it was noted that this would not necessarily imply a wider choice for students. At both year levels, at least one subject from the categories English, mathematics, science, and social science was universally, or nearly universally, available. At Year 11, compared to Year 12, there appeared to be a tendency to provide more subjects from the category designated as technical studies, and a little more on average from the business and commerce, and arts categories. That difference would correspond to the notion that in Year 12, compared to Year 11, the curriculum generally assumes a more specialised academic orientation.

Schools in 1983: Special Features of Curriculum and Organization

Part of the concern of the survey of schools conducted in 1983 was to find out the ways in which schools were responding to the increased propensity for young people to remain longer at school. The last page of the school questionnaire contained two open-ended sections. In the first section, principals were asked to describe any special features of the school's curriculum or organization, differentiating between these two aspects at two levels - Years 11 and 12, and up to Year 10. In the second section, principals were asked to indicate any plans for curricular or organizational change at Year 11 or Year 12 in 1984. Nearly all principals filled in one or both of these sections. The developments mentioned in these sections did not solely relate to responses to increased retentivity but also included initiatives implemented for other reasons.

Victoria (38 schools)

The most frequently mentioned organizational feature (by approximately one-third of the Victorian schools) was the use of a semester or unit system in Years 9 to 11. In one school, 75 units were available in Year 11. Four schools gave details of a vertically-grouped structure operating in Years 10 and 11, and in one school from Years 8 to 10. Such an arrangement typically involved the possibility of students from two or more adjacent year levels being grouped together for the teaching of a particular unit. Several schools had attempted to rationalize their resources in Year 12 by sharing classes with other local schools. The special curriculum features noted for Years 11 and 12 mainly consisted of the various courses offered, such as Technical Year 12, the

Tertiary Orientation Program (TOP), the Schools Year 12 and Tertiary Entrance Certificate course (STC) and a special community-based program. Further evidence of a broadening of the curriculum at the senior level was the access to technical school subjects for high school students, and the comment from one technical school principal that his school aimed to provide a wide variety of subjects because the curriculum was no longer just geared to apprenticeship. Special curriculum features noted by principals in Years 7 to 10 tended to focus on Year 10, and included the development of 'life skills' and job-related skills, community-based subjects, and remedial and extension programs. Future plans for curricular and organizational change at the senior school level centred almost exclusively on expansion of the curriculum, particularly at Year 12. Eight schools planned to introduce new subjects, seven schools were to offer an alternative course, and five schools were to establish or extend co-operation with local high or technical schools to provide a broader range of options for students.

Western Australia (25 schools)

The emphasis in the Western Australian schools was on special features of curriculum rather than organization. The only organizational feature mentioned more than once was the operation of sub-schools either across the whole secondary school or in sections of it. Comments on the curriculum at Years 11 and 12 focused on the different types of courses available. Ten schools mentioned that they offered both Tertiary Admissions Examination subjects and school-based Certificate of Secondary Education subjects, and twelve schools offered additional alternative courses such as vocational business studies and transition courses. Special curricular features in the middle school mentioned by several school principals were transition subjects or courses, and enrichment and remedial courses. The comments on plans for future change revealed a concern to develop curricula for a wider range of senior students.

> We have continual changing and review of non-tertiary courses to meet the needs of students.
>
> We will be looking at more flexible, really individualized arrangements for struggling Year 11s and 12s (i.e. looking at our own rigid habits and expectations in this area).

Thirteen schools were planning to introduce or expand Year 11 or Year 12 alternative courses. It should be noted that the information provided by schools in the study does not take into account changes made since that time as a result of the report on assessment in the upper secondary school (Western Australia, 1984).

Queensland (28 schools)

Few comments were made on organizational features at the senior level, but in the curriculum area ten schools mentioned that they offered school subjects that were not

linked to tertiary entrance, and five schools gave details of transition education programs. Three schools offered special programs throughout the secondary years - one in agriculture, another in outdoor education, and a third in personal development, including 'life skills', and areas of academic, sporting, and general interest. For Years 8 to 10 there were two issues, the organizational issue of streaming and the curricular issue of specialization, which drew many comments from principals. Sometimes streaming of classes operated at several year levels, sometimes at one only; in some schools streaming operated only in mathematics classes, in others across all classes. In other schools there was a stated policy to avoid streaming. In the same way, there were supporters for and against specialization in the middle school.

> Students take extra electives as a means of ensuring a delay of specialization, and a balance of practical, cultural, and academic subjects.
>
> We have eliminated the delay of specialization which was having a detrimental effect on career and employment prospects of Year 10 students.

Several schools mentioned the provision of transition and remedial programs, and a range of extra-curricular activities for students in Years 8 to 10. Looking to the future, eleven schools planned to offer more subjects, particularly school-based ones, at Year 11, and four schools planned to introduce a transition course at that level. One school proposed a more general education for Years 8 to 10 which would have 'less emphasis on the discipline of the subject and be related more to student experiences and life roles'.

South Australia (27 schools)

Under the heading of special organizational features of Years 11 and 12, several schools noted the provision of a choice between full-year, semester, and term subjects. Curriculum features mentioned at the senior level included: a choice of matriculation and non-matriculation subjects in Year 12, sometimes extending to Year 11 (nine schools); trade courses (four schools); transition courses (four schools); alternative courses (four schools); business studies courses (three schools); and vocational awareness courses (three schools). The most frequently mentioned feature of the middle school (by one-quarter of the respondents) was the use of 'setting' in English, mathematics and science. Several schools mentioned the provision of extra care and attention for students with learning problems. The curriculum features mentioned for Years 8 to 10 covered a wide range of individual subjects; in addition, several schools gave details of transition courses and social education programs. One school principal spoke of 'affirmative action for girls and Aborigines' and another of the across-the-curriculum thrust in technology in which all subjects 'looked at the way advances in technology have affected the way people live'. Future plans for the senior levels in the South Australian schools included both organizational and curricular changes. The most frequently mentioned organizational changes were the introduction or expansion of the semester

system (ten schools), and more flexible timetabling to enable vertical grouping (ten schools) which in some cases extended to the whole school. In the curriculum area, nine schools planned to increase and diversify their subject offering at the senior level, particularly in non-matriculation subjects. Two schools planned to offer a transition course, and a further two had specific plans to cater for the needs of girls.

Tasmania (Seven senior colleges)

Special features mentioned by all the colleges were the mixed Years 11 and 12 classes, and the range of subject offerings, commonly numbering between 70 and 100 High School Certificate level two and level three subjects. Most colleges offered additional programs for community members or non-tertiary students, programs such as transition education, leisure, and community education. Two colleges worked on a three-module time schedule, incorporating day, evening, and extended morning or mid-zone time slots. Future plans for the senior colleges centred on an increased and more appropriate provision of subjects for lower ability students. One college planned to provide three alternative courses rather than 'the smorgasbord of subjects presently available'.

Australian Capital Territory (Seven senior colleges)

The main curricular feature of the colleges was the provision of three types of courses - tertiary accredited, accredited (less academic), and registered (hobby, sports, and recreational). As in Tasmania, the range of offerings in the Australian Capital Territory colleges was large and diverse, with at least 50 academic and almost as many recreational courses. Several colleges mentioned that all curriculum development was school-based, no subjects were compulsory, and a system of continuous assessment was used. The organizational feature listed by all colleges was the operation of mixed Years 11 and 12 classes for most subjects. Several colleges referred to the use of the semester system, and the provision for part-time as well as full-time students. The future plans of four colleges included attempts to broaden the subject offerings for non-matriculation students. Several colleges mentioned that constant evaluation and revision of courses took place at both formal and informal levels.

Curricular and Organizational Features: A Summary

Although equal space was allocated on the school questionnaire for descriptions of organizational and curricular features, entries in the latter category were far more frequent than in the former. Some organizational features were mentioned several times in three or four States; for example, the use of the semester system, and the practice of vertical grouping. Streaming and setting for certain subjects in the junior and middle schools were listed as special organizational features in two States. There was greater agreement across States in the curriculum features selected for special comment by

school principals. In all States and the Australian Capital Territory, repeated mention was made of the diverse range of subjects and courses available to students in the post-compulsory years of schooling, particularly the transition and alternative couses for those students who were not interested in a university education. There was less commonality in the special curriculum features listed for the junior and middle schools, although several schools in three States mentioned the provision of remedial and enrichment programs, and transition education subjects and courses.

The responses to the 'future plans' section of the questionnaire fell into a similar pattern to the descriptions of present practice, with curricular change more frequently mentioned than organizational change. Some structural changes were listed a number of times within the one State: in South Australia, the introduction of a semester system and vertical grouping was mentioned by several schools; and in Victoria, co-operation within a cluster of local schools to extend student options was noted. The proposed changes to the curriculum for Years 11 and 12 were almost exclusively focused, as were present practices, on a broadening of the subject offering to make it more appropriate for those students who were not bound for an academic tertiary education. Approximately half the schools in the total sample, spread quite evenly across the States, stated an intention to offer new subjects, alternative courses or transition programs.

A Concluding Comment

There were three main sections to the analyses of retentivity and related issues at school level presented in this chapter. The first section examined differences between schools in retention rates, and resulted in the inference that part of the differences between schools in retentivity was attributable to the socioeconomic and ethnic background characteristics of the school population, and part was attributable to the school system and State of which the school formed a part. At Year 11 level, there appeared to be differences between school systems which were not solely attributable to the social characteristics of the States. It was postulated that these differences in retentivity may have been due to differences in the type of curriculum available, or, referring back to Chapter 2, to the availability of other options for full time study. The possibility that factors such as these might have been involved was consistent with the observation that differences in retentivity to Year 12 between States were much smaller than differences in retentivity to Year 11.

In the second main section of the chapter some general features of the curriculum at Year 11 and Year 12 were sketched, using data from a 1983 survey of schools. Those analyses were based on subject titles and provided little detail about the nature of what was actually taught. However, it was observed that there appeared to be greater breadth at Year 11 than at Year 12.

The third section consisted of a collection of descriptions by school principals of organizational and curriculum developments in schools which were responses to many educational issues of the 1980s. In these descriptions there could be ideas worth further exploration by researchers, and innovations worthy of adaption by other schools.

CHAPTER 5

PERSPECTIVES OF STUDENTS IN YEAR 10

Most young people in Australia remain at school until Year 10. Across all school systems in 1983, some 95 per cent of young people remained at school until Year 10. Even the government school systems, which have traditionally had lower retention rates than the non-government school systems, had an apparent retention rate from the beginning of secondary school to Year 10 of over 90 per cent. Hence, in studying the views of Year 10 students in government schools, this chapter is concerned with a sample of almost the entire cohort which began in government schools.

The chapter begins with an examination of the intentions of Year 10 students with regard to remaining at school, and observes that those intentions suggest that the recent rise in school retention rates is not a temporary phenomenon. The chapter also considers the reason given for plans of both students planning to leave school and of those planning to remain at school. As a result of this, it not only notes the dominance of personal investment considerations in the plans of students but draws attention also to other factors and the differences between groups of students according to personal characteristics and the nature of their school system.

Results reported in this chapter have been based on a survey of Year 10 students in five States and the Australian Capital Territory. Students were asked to give an indication of their immediate educational intentions, their reasons for staying at school or leaving, and their longer-term future plans. There was a 98 per cent response rate from schools to the questionnaire. Replies were received from more than 8000 students in 159 schools, giving just over 50 students per school. In general, where results from more than one State were involved, the results presented have been weighted so that each State has been represented in proportion to the number of students in that government school system.

Student Intentions Regarding Staying at School

Table 5.1 records information concerning students' intended stages of leaving school. Interpretation of these data for prediction need to take into account the possibility that intention may not translate into action, and that around 17 per cent of Year 10 students said that they were uncertain of when they would leave school.

Taking simply the percentage of students who indicated that they would leave school after Year 12, some inferences can be drawn. Across high schools in Victoria, Queensland, South Australia, and Western Australia, around half of those in Year 10 indicated that they would remain to the end of Year 12. In the Australian Capital

Table 5.1 Percentage of Year 10 Students Indicating Various Intended Stages of Leaving School: 1983

	Stages of leaving			
	End of Year 10	End of Year 11	End of Year 12	Not sure
School system				
Australian Capital Territory	13	2	70	16
Victoria:				
High	9	19	51	20
Tech.	21	33	16	29
Queensland	31	3	52	14
South Australia	9	24	49	18
Western Australia	28	11	47	14
Tasmania	50	6	25	18
Total (unweighted)	22	14	47	17

N = 8112

Territory the corresponding figure was 70 per cent, and in Tasmania one quarter of the students indicated this as their intention. To place these figures in perspective, data published by Commonwealth Department of Education and Youth Affairs for 1982 indicated that the apparent retention rates from Year 10 to Year 12 were as follows: Australian Capital Territory (76 per cent), Queensland (37 per cent), South Australia (38 per cent), Western Australia (34 per cent), and Tasmania (22 per cent). From our own studies, the figure for Victorian high schools was 38 per cent (Ainley et al., 1984). For 1983, the progression rates from Year 10 to Year 12 based on July enrolments were: Australian Capital Territory (81 per cent), Queensland (42 per cent), South Australia (45 per cent), Western Australia (36 per cent), and Tasmania (26 per cent). For Victorian high schools the corresponding figure was 44 per cent. Hence it seemed probable that the increase in retention rate noted in 1983 was likely to be sustained or increased even further.

Plans for Further Study

Table 5.2 contains information about the plans for further study after leaving school for those students who intended to leave school after Year 12, 11, and 10 respectively, and for those who were undecided. The data in this table were not weighted.

In general, it can be noted that over four-fifths of those who planned to stay at school to Year 12 planned further study on leaving school, and for most (64 per cent of all students planning Year 12) that was planned as full-time study. For those planning to leave school at the end of Year 10, just over half (55 per cent) planned some form of further study, either through an apprenticeship or in another TAFE course. In terms of

Table 5.2 Year 10 Students: Plans for Further Study (percentages)[a]

	Time of leaving				
	After Year 10	After Year 11	After Year 12	Undecided	Total
No further study	45	41	16	36	29
Further full-time study:					
University	-	1	30	9	16
College	-	3	16	6	9
TAFE (non-apprentice)	15	10	7	9	9
Other	5	6	9	5	7
Not indicated	-	-	1	2	1
Total further full-time study	20	20	64	31	42
Further part-time study:					
University	-	-	5	2	3
College	-	1	3	1	2
TAFE (non-apprentice)	5	4	3	4	4
Apprentice	29	32	7	25	18
Other	1	2	2	1	2
Not indicated	-	-	-	-	-
Total further part-time study	35	39	20	33	29
Other responses indicating further study	-	-	-	-	-
Number of valid cases	1666	1063	3680	1337	7746
Missing cases - destination	92	41	70	64	267
Missing cases - time of leaving					99

Note: Apprentices have been entered as part-time study regardless of whether the student indicated that it was full-time or part-time.

[a] These data were not weighted.

N = 8112

Table 5.3 Year 10 Students: Reasons for Planning to Leave School after Year 10

	Mean rating[a]				Mean rating[a]		
		Sex			Systems		
	Total	Males	Females	F value[b]	High retention	Low retention	F value[b]
Job market							
I will have a job to go to	2.63	2.74	2.47	16.9	2.87	2.51	26.6
I hope to get a job	3.71	3.71	3.70	0.0	3.65	3.73	4.7
I intend to start an apprenticeship	2.83	3.33	2.10	422.2	2.97	2.76	9.1
I want to earn my own money	3.35	3.40	3.28	8.8	3.35	3.35	0.0
Satisfaction with school							
School work is not interesting	2.25	2.30	2.18	4.0	2.37	2.19	8.5
I do not enjoy school	2.40	2.43	2.35	2.1	2.57	2.31	18.3
I am not doing well enough at school	2.15	2.14	2.16	0.2	2.25	2.09	7.8
Utility							
I will have enough education for what I want to do	2.86	2.93	2.77	9.9	2.85	2.86	0.0
I could not do subjects that would be useful to me	2.08	2.05	2.13	2.2	2.08	2.08	0.0
I think it is better to get into the job market early	3.07	3.17	2.94	16.1	2.97	3.12	6.7
Advice							
My parents do not want me to stay at school	1.48	1.47	1.48	0.1	1.44	1.49	1.2
My teachers do not think I should stay at school	1.49	1.56	1.40	12.1	1.55	1.47	3.1
Most of my friends plan to leave school early	1.41	1.45	1.35	6.2	1.37	1.43	1.8

Note: Data have been weighted to reflect the size of the government school population in each State.

a Mean rating on a scale from 1 = not at all important to 4 = very important.

b Values underlined indicate a difference significant (after allowing for a design effect factor of 3.5) at the five per cent level.

N = 1785

intentions for further study, those students planning to leave school at the end of Year 11 were similar to those who planned to leave at the end of Year 10. Those who were unsure of the stage at which they would leave school were just a little more inclined to further full-time study than those who planned to leave school at the end of Year 10.

Of all the students surveyed, about 70 per cent said that they planned some further study after leaving school.

Reasons for Planning to Leave School at the End of Year 10

Table 5.3 contains information related to reasons given by Year 10 students for planning to leave school before Year 12, which, for ease of interpretation, have been loosely grouped into four categories: reasons related to the job market, to satisfaction with school, to the perceived usefulness of education, and to advice from other people. The figures recorded are mean ratings on a scale from 1 = 'not at all important' to 4 = 'very important'. The first column of the table gives the mean rating for all students for each item. As a cluster, the items concerned with the job market were rated as the most important to students as a whole ('I want to earn my own money', 'I hope to get a job'), and the influence of significant others was rated as least important ('my teachers do not think I should stay at school'). In addition, students were asked to indicate what was the most important reason for leaving school. Of those who indicated only one reason, the most predominantly favoured responses were:

I hope to get a job (24 per cent);
I want to earn my own money (23 per cent);
I intend to start an apprenticeship (22 per cent).

In other words, for those planning to leave school early, the desire to enter the workforce seemed to be a stronger motivating factor than school-related reasons.

Sex Differences

The second and third columns in Tables 5.3 show the mean importance ratings regarding reasons for leaving school given by male and female students planning to leave school. There were many items to which male and female students responded in a significantly different way, and in several items the difference was substantial. Comment has been made only on items where the difference in means was 0.2 points or greater. As would have been expected because of greater male involvement in apprenticeship schemes, the availability or non-availability of an apprenticeship was more important to males than to females. Among the leavers, having a job and getting into the job market early were rated more highly by males than by females as reasons for leaving school at the end of Year 10.

Table 5.4 Year 10 Students: Reasons for Planning to Stay at School after Year 10[a]

	Mean rating[b]				Mean rating		
		Sex			Systems		
	Total	Males	Females	F value[c]	High retention	Low retention	F value[c]
Job market							
I cannot find a job	2.42	2.36	2.48	15.6	2.51	2.27	62.8
I cannot get an apprenticeship	2.10	2.21	2.00	49.2	2.18	1.96	54.1
I have no other plans	2.19	2.13	2.25	20.4	2.22	2.15	5.5
Satisfaction with school							
I find school work interesting	2.50	2.39	2.61	93.0	2.48	2.53	3.9
I am enjoying school	2.44	2.31	2.56	113.4	2.40	2.49	12.8
I am doing well in my school work	3.21	3.13	3.29	63.7	3.24	3.16	13.6
Utility							
I need to complete Year 11 or 12 for my future career	3.48	3.38	3.57	73.1	3.49	3.46	1.5
I can do subjects that are useful to me	3.49	3.44	3.54	27.8	3.49	3.48	0.4
Another year at school could help me to get a job	3.30	3.28	3.31	1.5	3.39	3.13	119.2
Advice							
My parents want me to stay at school	2.59	2.58	2.60	0.7	2.59	2.59	0.0
My teachers think I should stay at school	2.03	2.00	2.06	5.2	2.05	2.00	3.8
My friends decided to stay at school	1.43	1.41	1.44	3.1	1.42	1.45	2.0

Note: Data have been weighted to reflect the size of the government school population in each State.

a Includes students who were undecided about leaving or staying.

b Mean rating on a scale from 1 = not at all important to 4 = very important.

c Values underlined indicate a difference significant (after allowing for a design effect factor of 3.5) at the five per cent level.

N = 1785

System Differences

As was noted in Chapter 3, two different patterns of retention could be identified when looking across state systems. The Australian Capital Territory, Victoria, and South Australia had higher retention rates to Year 11 than Tasmania, Queensland, and Western Australia. Table 5.3 shows the differences in mean ratings of Year 10 students' reasons for leaving school in the state systems with high and low retention rates. As was the case in the section above, comment has been restricted to those items where the difference in means was largest.

Among those planning to leave school at the end of Year 10, students from high retention systems gave higher mean ratings than students from low retention systems to two items: reasons concerned with having a job, and a lack of enjoyment in school. An interpretation of these findings could be that, in States where the accepted thing to do was to stay on at school to Year 11, students would need strong and definite reasons to impel them to leave: reasons such as a strong emotion (disliking school) or the availability of a definite alternative (having a job to go to).

Reasons for Staying at School Beyond Year 10

Students who planned to remain at school to the end of Year 11 or Year 12 indicated the importance of a series of reasons for their decision to remain at school.

Table 5.4 contains information related to reasons for staying at school given by students who planned to remain at school to Year 11 or Year 12, or who were uncertain. The same format has been used as for Table 5.3. In Table 5.4, it is the cluster of items concerned with utility (for example, 'I need to complete Year 11 or 12 for my future career') that were the most highly rated as reasons for staying at school. The least highly rated reasons concerned the influence of teachers and friends. In terms of the reasons indicated by students as the most important reason for remaining at school, one statement stood out from the rest. Sixty-two per cent of students indicated that 'I need to complete Year 11 or 12 for my future career' was the most important reason for staying at school. The next most favoured reason was 'Another year of school could help me to get a job' (13 per cent of students) followed by 'I can do subjects that are useful to me' and 'I cannot find a job', each of which was supported by only five per cent of students.

A comparison of the factors which were designated as important by those planning to leave school with factors designated as important by those who planned to remain at school suggested that the latter group placed greater importance on utility, satisfaction, and parental advice while the former group rated more highly reasons connected with the job market.

Sex Differences

There were many items among reasons for staying at school to which male and female students responded in significantly different ways. The second and third columns of Table 5.4 show the mean ratings given by males and females respectively to reasons for staying at school. Comment has been restricted to items where the difference between the mean ratings was largest.

Among the students who planned to stay on at school there were differences in the responses of males and females in three of the four categories: job market, satisfaction with school, and utility. In responding to seven of the items in these categories, the general tendency was for female students to give a higher rating to the items than male students. The particular influences on female retention were the lack of alternatives to school (no job, no other plans), a sense of satisfaction and achievement in school (finding school work interesting and enjoyable, and doing well), and career requirements (needing a Year 11 or 12 qualification, and doing useful subjects). The effect size for the effect of sex of student was greatest for 'enjoying school' and 'finding school work interesting'. This result suggests that school factors may be more important influences on the decisions of female students to remain at school than for males. This interpretation would be consistent with results obtained in a study of Victorian government high schools (Ainley et al., 1984).

In making the observation above, it is also important to note the existence of two kinds of influence on returning to school which differed between males and females, one incorporating the student's level of satisfaction with school, and the other concerned with factors external to school. This suggests the possibility that the higher ratings might have been made by two different groups of female students. One might speculate that some females, to a greater extent than males, consider that they are forced to stay at school because of a lack of other options, while other females, to a greater extent than males, exhibit a high motivation to stay at school, linked with the quality of the school experience. There was in the data support for this proposition. There was almost no correlation between the ratings given to 'I can't find a job' and either 'I enjoy school' ($r = 0.01$) or 'school work is interesting' ($r = 0.02$). The correlation between 'no other plans' and these reasons was small (0.11, 0.14), but between the two school factors the correlation was strong ($r = 0.59$). Therefore the group of female students who gave strong ratings to out-of-school factors as reasons for returning to school may well need particular attention.

The higher rating given by females, compared to that given by males, to 'I need to complete Year 11 or 12 for my future career' could possibly reflect a shift in social attitudes which was discussed in Chapter 3. That response could suggest that in 1983 young females held higher educational and career aspirations than young males.

System Differences

Chapter 3 contained an extensive discussion of patterns of retention among the government school systems considered in this study. As a brief summary of the patterns observed it could be noted that three of the systems (the Australian Capital Territory, Victoria, and South Australia) had relatively higher retention rates to Year 11 and three had relatively lower retention rates to Year 11 (Queensland, Western Australia and Tasmania).

There were three items that elicited rather higher ratings from students staying on at school in high retention systems than from students staying on in low retention systems. The items concerned the unavailability of jobs or apprenticeships, and the desirability of further years at school for getting a job. These trends seem to indicate that, in a high retention environment, students maintain a belief in the maxim that more schooling means a better chance of employment and a better job. As previously mentioned (see Chapter 4), the States with a high retention rate to Year 11 tended to be those which offered more diverse curricula at that year level, so it is probable that students who were unable to find places in the workforce would be more likely to decide on further schooling when a greater range of curricula options was available to them. In addition to these three items the item, 'doing well in my school work', was a little more highly rated in the high than the low retention systems.

Planned Stage of Leaving School

Students who responded to questions about the relative importance of various reasons for returning to school included students who planned to leave at the end of Year 11, students who intended to complete Year 12, and students who were undecided about when they would leave school. There was some ambiguity as to whether 'undecided' referred to indecision between Year 11 and Year 12, or uncertainty about continuing beyond Year 10. This ambiguity needs to be taken into account when examining the responses of that group of students.

Table 5.5 contains the mean ratings given to various reasons for staying at school by the groups of students described above. For several of the reasons listed, there were significant differences in ratings given by the three groups. First, to the three job market reasons those who were undecided gave higher importance ratings than those who planned to complete Year 12, and slightly higher ratings than those who planned to leave school at the end of Year 11. This result would appear to suggest that for some students who were uncertain about continuing at school, employment prospects were of some importance, and were of greater importance than to those who planned to complete their secondary schooling.

Secondly, students who planned to complete Year 12 rated satisfaction with school factors more highly than those who planned to leave at the end of Year 11, and a little

Table 5.5 Year 10 Students who Plan to Stay at School beyond Year 10: Reasons for Staying at School

	Mean rating			
	End of Year 11	End of Year 12	Undecided	F value
Job market				
I cannot find a job	2.73	2.12	2.90	316.4
I cannot get an apprenticeship	2.46	1.80	2.57	337.4
I have no other plans	2.27	2.09	2.41	47.2
Satisfaction with school				
I find school work interesting	2.24	2.65	2.33	124.3
I am enjoying school	2.16	2.58	2.30	111.1
I am doing well in my school work	3.08	3.25	3.21	23.4
Utility				
I need to complete Year 11 or 12 for my future career	3.21	3.78	2.93	597.8
I can do subjects that are useful to me	3.41	3.57	3.34	61.7
Another year at school could help me to get a job	3.52	3.20	3.34	62.0
Advice				
My parents want me to stay at school	2.56	2.63	2.52	8.7
My teachers think I should stay at school	1.97	2.10	1.92	21.1
My friends decided to stay at school	1.43	1.41	1.47	3.4

Note: Data have been weighted to reflect the size of the government school population in each State.

[a] Values underlined indicate a difference significant (after allowing for a design effect factor of 3.5) at the five per cent level.

N = 6327

more highly than those who were undecided. Doing well at school was almost as important to the undecided group as to those who planned to complete Year 12. It appeared that even though the undecided group gave similar ratings to job market factors as the Year 11 leavers, they rated satisfaction with school considerations more highly than the Year 11 leavers.

Thirdly, differences in ratings given to utility factors as reasons for staying at school depended on the particular statement under consideration. The requirements of a planned future career were rated more highly by those planning to complete secondary education than by the other groups. By contrast, the more general utility statement 'another year at school could help me get a job' was rated more highly by students planning to leave school at the end of Year 11 than by those planning a complete secondary education. Those who were undecided gave a mean rating which was mid-way between the two groups. Being able to do useful subjects was more important to the students planning to study at Year 12 than either of the other two groups.

Fourthly, there was a small difference between those planning Year 12 completion and other students in the importance of teachers' views. The intending Year 12 students noted this as more important than did the other students.

The discussion above of the relative values of the importance ratings given to various reasons by each of the groups considering a return to school tends to obscure what was common to the groups, and which reasons were given the highest importance ratings by the three groups. For each of the groups the four reasons given the highest importance ratings were the three items listed under the heading 'utility' - and which referred to career requirements, useful subjects, and improved job prospects - together with the school satisfaction item, doing well at school. The two highest rated items for those planning to complete Year 12 were those referring to 'career requirements' and 'useful subjects'. For the students planning to leave after Year 11, and for those who were undecided, the two reasons with the highest importance ratings referred to 'improved job prospects' and 'useful subjects'.

Net Effects of Student and System Characteristics

The sections above have considered the ratings given to various reasons for remaining at school and the differences in ratings given by males and females, students from high and low retention systems, and between students planning to complete different levels of schooling. The present section examines differences in ratings given according to these factors, together with other characteristics such as socioeconomic background, perceived ability, and ethnic background. To do this, regression analyses were conducted using the rating given to each of a series of reasons for staying at school as the dependent variables, and a series of independent variables. The independent variables were as follows:

Table 5.6 Net Effects of Student Characteristics on Reasons for Continuing at School among Year 10 Students[a,b,c]

					Ethnicity		Intention		
	System	Sex	SES	Perceived ability	Eng.	N-Eng.	Year 11	Undecided	Multiple R
Job market									
I cannot find a job	**-.05(-.13)**	**.08(.18)**	**-.05(-.03)**	**-.09(-.14)**	-.03	-.04	**.17(.51)**	**.25(.70)**	.34
I cannot get an apprenticeship	-.04	**-.06(-.14)**	**-.06(-.04)**	**-.09(-.14)**	-.02	-.01	**.18(.51)**	**.24(.65)**	.34
I have no other plans	-.01	**.07(.14)**	-.02	**-.06(-.08)**	-.00	.00	.05	**.11(.28)**	.15
Satisfaction with school									
I am doing well in my school work	**-.06(-.10)**	**.10(.15)**	-.03	**.10(.11)**	-.01	**.08(.15)**	**-.07(-.13)**	.00	.19
I am enjoying school	.01	**.12(.22)**	-.01	**.09(.12)**	-.00	.04	**-.13(-.32)**	**-.09(-.20)**	.24
I find school work interesting	-.01	**.10(.19)**	-.02	.11(.13)	.02	**.07(.16)**	**-.14(-.32)**	**-.11(-.26)**	.25
Utility									
I need to complete Year 11 or 12 for my future career	**-.08(-.15)**	**.07(.13)**	.02	**.13(.15)**	.01	.04	**-.22(-.50)**	**-.35(-.76)**	.43
Another year at school could help me to get a job	**-.11(-.22)**	.03	-.00	**-.07(.08)**	.01	-.04	**.10(.23)**	**.04(.09)**	.19
I can do subjects that are useful	-.03	**.05(.08)**	.01	.05	.03	.03	**-.08(-.14)**	**-.12(-.20)**	.16
Advice									
My parents want me to stay at school	-.00	.00	-.00	-.00	.01	**.05(.13)**	-.03	**-.05(-.13)**	.07
My teachers think I should stay at school	-.04	.02	-.02	**.09(.11)**	.01	.02	-.04	**-.06(-.14)**	.13
My friends decide to stay at school	.02	.02	.01	-.03	.01	-.00	.01	.03	.06

a Standardized coefficients have been shown together with metric coefficients in brackets where the effect is significant at the five per cent level.

b Coefficients significant at the five per cent level have been printed in bold type.

c Data have been weighted to reflect the size of the government school population in each State and a design effect factor of 3.5 has been used in calculating significance levels.

N = 6327

(a) System was a dichotomous variable coded as 1 for systems which retained more than 60 per cent of their students to Year 11, and 2 for systems which retained 60 per cent or fewer of their students to that level.

(b) Sex was a dichotomous variable with males coded as 1 and females coded as 2.

(c) Socioeconomic status was based on father's occupation, coded initially on the 16-point ANU scale (Broom et al., 1977) but collapsed to the 6-point scale. Higher scores indicated higher levels of socioeconomic status.

(d) Perceived ability was the students' rating of their ability on a 5-point scale from 'a lot below average' to 'a lot above average'.

(e) Ethnic background was captured as two dummy variables based on the father's country of birth. The first referred to non-English-speaking background. On this variable, a student whose father was born in a non-English-speaking country was coded as 1 relative to others coded as 0. The second referred to an English-speaking (non-Australian) background. On this variable, a student whose father was born overseas in an English-speaking country was coded as 1 relative to others coded as 0. Australian background students were the excluded group in this set of dummy variables.

(f) Intended schooling was captured as two dummy variables based on the stated stage of leaving school. The first referred to planning to leave school at the end of Year 11. On this variable, students who planned to leave at the end of Year 11 were coded as 1 relative to others coded as 0. The second referred to indecision. On this variable, students who were uncertain as to when they would leave school were coded as 1 relative to others coded as 0. Students who planned to complete Year 12 were the excluded groups so that effects were relative to this group.

The results of these analyses indicate the strength of the associations between the ratings given and the characteristics being considered, when the other factors included were held constant. Table 5.6 contains the standardized coefficients, used for comparisons of effect size in the one equation, and metric coefficients, used for comparisons of the same independent variable in differing equations. In addition, Table 5.6 records the multiple correlation coefficient which, when squared, provides an indication of how much of the variance in ratings could be interpreted as arising from the factors listed.

The effects of the type of education system, sex differences, and intended education have been discussed in the preceding sections. The discussion below examines the effects of these factors after statistical allowance has been made for other influences.

System. Mean ratings given by students from high retention systems were higher than mean ratings given by students from low retention systems for job market factors ('I

cannot find a job'), but the size of the effect was rather smaller than the unadjusted effect size. The largest differences occurred with respect to 'career requirements' and 'improved job prospects', both of which were given higher ratings by students from high rather than low retention systems. Doing well at school was rated a little more highly in the high retention systems.

Sex. Female students rated as more important than did male students school satisfaction factors (for example, 'I enjoy school') and long term career factors ('I need Year 11 or 12 for my future career') and to a smaller extent curriculum factors ('useful subjects') as reasons for returning to school. In addition, female students rated not being able to get a job as more important than did male students. In a previous section it was suggested that there was evidence of two groups of female students planning to return to school. One group was motivated by school factors and the other by a lack of job opportunities.

Socioeconomic background. Other things equal, students from lower socioeconomic backgrounds rated job opportunities as a little more important in their plans to return to school than did students from higher socioeconomic backgrounds. However, the size of the coefficient was less than 0.1.

Perceived ability. Students who rated themselves as more able tended to place greater emphasis on school factors (for example, 'I enjoy school'), future career requirements, and advice from teachers than did their peers who rated themselves as less able. Students who rated themselves as less able placed greater emphasis on job market factors and to a smaller extent the belief that another year at school could help in obtaining a job.

Ethnic background. Students of an English-speaking migrant background did not give different ratings to any of the reasons for returning to school than students of Australian born parents. Students from a non-English-speaking background differed from those of an Australian born background in giving slightly higher ratings to the importance of doing well at school work, finding school work interesting, and to the wishes of parents.

Intended education. Some of the strongest differences between student characteristics were associated with intended stage of leaving school. Students who planned to leave school at the end of Year 11 or who were undecided accorded greater importance to job market factors in considering whether to return to school than did those who planned to complete Year 12. They also placed a little stronger emphasis than that group on the belief that another year at school would improve their job prospects. By contrast the students planning to leave after Year 11 and those who were undecided placed less emphasis than the Year 12 group on career requirements or school satisfaction factors.

In Summary

Even though it was generally true that Year 10 students rated personal investment factors as more important in their decision to return to school than satisfaction with school, the advice of others, or job market factors, there were important differences among students. Students differed according to their sex, socioeconomic and ethnic background as well as their perceived ability and the type of education system in which they enrolled. However, the larger differences related to the intended stage at which the student planned to leave school.

Students' Comments

At the end of the Year 10 questionnaire, a space was allowed for students to make any additional comments about school or their future plans. Approximately one-third of the students offered some comment, mostly on plans for the future.

Five per cent of the students who responded said they were undecided about their future or had no definite plans. Two-thirds of the student responses comprised an extension and expansion of responses to items 6 and 7 on the questionnaire, which asked 'What sort of job do you hope to have in ten years' time?'. Details were given of intended destinations, time to be taken to achieve desired goals, and ways of achieving aims. In many instances, it was clear that students had thought through alternative career plans in case they were unable to achieve their first option; while acknowledging the need to be flexible in outlook, these students displayed a determination to pursue a career of their own choosing. Eight per cent of these students said they would undertake further study if jobs or apprenticeships were unavailable.

Four per cent of the comments contained statements about the value of an education and ways of widening career options in the current economic climate.

> I don't see the point in leaving school at the end of Form 4 without having a job. The more education you have, the better are your chances of getting a job. Education is something you need.

Approximately 20 per cent of the student responses were statements of praise or criticism about various aspects of school life. Four per cent of the students said that they enjoyed school and saw it as useful, while an equal number did not enjoy school and felt it was a waste of time. Most of the remaining comments were concerned with criticisms of the curriculum. Students were particularly critical of the limited range of subjects available to them, restrictive time-tabling of subjects, insufficient career advice provision and work experience opportunities, and the irrelevance of many of their subjects and courses.

> I think school does not really teach you all that much that will be of use in later life and too much emphasis is placed on academic achievement.

> I don't think school teaches you enough about the outside world (work). I have a part-time job and it's nothing like school. Also I don't think maths (as it is taught) is relevant to work - you don't learn enough general or business maths, you learn a lot of complicated maths you may not use again.

In addition, there were some positive remarks made about the helpfulness of teachers, and some negative comments on teacher indifference and inadequacy. Mention was made of inadequate facilities, with criticism directed at such areas as technical and computer equipment, and sporting and recreational facilities.

Year 10 Students: A Summary

From the stated intentions of Year 10 students, it seemed likely that the 1983 increase in retention from Year 11 to Year 12 would be maintained in subsequent years, and possibly reach an even higher level.

The majority of Year 10 students indicated that not only did they wish to stay on at school beyond the school leaving age, but also that they foresaw a continuing involvement with education after leaving secondary school. Further study featured in the plans of 70 per cent of students; and even among the groups of students intending to leave after Year 10, 55 per cent said they planned to continue with some form of study.

The potential early school leavers, when indicating their reasons for leaving after Year 10, placed most importance on job-related reasons rather than school-related reasons. This was particularly true for male students.

Students who planned to stay on to Year 11 or Year 12, or who were undecided, placed more importance on school-related utility factors (such as the need for higher qualifications or the availability of useful subjects at school) than on job-market factors. These students gave greater emphasis to school factors as a reason for staying at school or leaving than did early school leavers. Among students intending to stay on at school, satisfaction with school was a more important factor for females than for males.

Comments made by students at the end of the questionnaire confirmed the earlier findings that students were more concerned with the personal investment aspects of schooling than with the enjoyment and intrinsic worth of their school experience. Students wanted to elaborate on their career plans, and tended to refer to their schooling in relation to the contribution it could make or fail to make to their future plans.

CHAPTER 6

PERSPECTIVES OF STUDENTS IN YEAR 11

This chapter is concerned with students who had proceeded through government schools to one year beyond what are now considered the compulsory years of schooling. Across Australia in 1983 some 95 per cent of young people remained at school to Year 10. For government schools in 1983, the apparent retention rate from the beginning of secondary school to Year 10 was over 90 per cent, but from the beginning of secondary school to Year 11 the retention rate in government schools was only 58 per cent. In this chapter, some of the reasons given by a sample of those students in Year 11 for staying at school beyond the compulsory years are considered. The results not only provide further evidence of the strong emphasis placed on personal investment factors, but also provide an indication of other factors and the relative importance placed on those factors. The chapter also examines the intentions of this group of students for 1984 and beyond. It notes that a substantial proportion of the group planned some continuing involvement in education on either a part-time or full-time basis after leaving or finishing school.

The survey of Year 11 students took place in five Australian States and the Australian Capital Territory; it involved just over 6,500 students in 133 secondary schools. The response rate from schools was high with over 95 per cent of schools responding to the request to participate. In most tables which refer to more than one state system the data have been weighted so that they reflect the size of the school population at that level in that system.

Most of the students who were in Year 11 at the time of the survey had planned to return to school at the end of Year 10. Fewer than nine per cent in any system, and typically around six per cent of Year 11 students, had not expected to return to school at the end of the previous year. Two qualifications seem warranted with regard to these data. First, there may have been an element of 'after the event' rationalization in the student responses. Secondly, different results may have been obtained for the students who returned to school but left during the year. The effect of these factors on the results is uncertain. Notwithstanding those qualifications, the evidence suggests that almost all of those students in Year 11 in October 1983 had planned to return to school at the end of Year 10.

Reasons for Staying to Year 11

Table 6.1 contains information related to reasons for staying at school to Year 11 given by students in the survey. The figures recorded are the mean ratings on a scale from 1 = 'not at all important' to 4 = 'very important'. The data on which the means have been

Table 6.1 Year 11 Students: Reasons for Continuing at School

Reason	Mean rating			F value[a]	Mean rating		F value[a]
		Sex			System		
	Total	Males	Females		High retention	Low retention	
Job market							
I could not find a job I liked	1.72	1.78	1.66	19.0	1.80	1.56	72.4
I could not find any kind of job	1.56	1.60	1.52	12.5	1.64	1.41	74.7
I could not get an apprenticeship	1.59	1.85	1.32	431.5	1.69	1.42	93.5
Satisfaction with school							
School work is interesting	2.17	2.09	2.26	54.2	2.16	2.18	0.5
I enjoy school	2.21	2.06	2.36	154.4	2.19	2.25	5.6
I do well in my school work	2.80	2.74	2.85	26.9	2.79	2.81	0.7
Utility							
I need to complete Year 12 for my future career	2.87	2.73	3.00	76.6	2.68	3.23	294.5
I could do subjects that are useful	3.00	3.03	2.96	9.0	3.03	2.94	12.1
Another year at school could help me get a job	3.06	3.04	3.07	1.5	3.22	2.74	300.4
Advice							
My parents want me to stay at school	2.83	2.82	2.84	0.2	2.91	2.67	92.4
My teachers thought I should stay at school	1.69	1.66	1.71	4.5	1.72	1.62	19.6
Most of my friends stayed at school	1.82	1.82	1.83	0.5	1.82	1.83	0.5
Financial assistance							
I get an SAS allowance	1.27	1.29	1.25	3.7	1.29	1.23	7.6

Note: Data have been weighted to reflect the size of the government school population in each State.

[a] Values underlined indicate a difference significant (after allowing for a design effect factor of 3.5) at the five per cent level.

N = 6516

based have been weighted so that each state system was contributing to the total in proportion to its government secondary school population (see Chapter 2). In addition to recording mean ratings based on the total sample, Table 6.1 also shows differences in the mean ratings recorded by males and females and by students from different types of government school systems. With regard to this latter categorization the ratings from students in systems with relatively high retentivity to Year 11 were compared with those from systems with relatively low retentivity.

The Total Sample

For the total sample, it was items concerned with utility which were rated most highly in terms of their importance by students. These referred to needing Year 11 or Year 12 for a future career, the belief that another year at school could help in getting a job, and being able to do subjects that were useful. The mean ratings accorded to these three items were very similar in magnitude and of a value which corresponded to 'fairly important' on the original scale.

Even though utility factors were generally rated as the most important, other reasons were also considered important. Across all systems, school factors (and particularly 'I do well in my school work') were considered important, as were the wishes of parents. Enjoyment of school and interesting school work were middle ranked reasons for returning to school. Of the 13 listed reasons these two were the sixth and seventh ranked items, being less important than doing well in school work but more important than job market factors or the influence of friends.

In general, not finding a job was not rated as a highly important reason to return to school, but for some groups it may have been important. Among students from Victorian secondary technical schools, which have traditionally held a strong vocational emphasis, not being able to get an apprenticeship and not being able to get a suitable job were rated as rather more important than was the case in general. The low rating given to 'I get an SAS allowance' for the total sample does not mean a great deal, as it only has relevance to those students in receipt of the allowance. In a later section of the report, differences between students in receipt of such an allowance and other students are discussed.

The responses of the Year 11 students were similar to the responses of the Year 10 students who were considering staying at school (with utility factors and parents' advice rated as more important influences than for the Year 10 students who planned to leave), except that in order of importance, parental advice ranked higher than items from the job market category for Year 11 students, while the reverse was the case for the Year 10 'stayers'. The explanation of this difference is probably that the Year 10 'stayers' included undecided students, some of whom may ultimately have left at the end of Year

10, and, as was reported in the previous chapter, those who were undecided placed a higher importance on job market factors than those who planned to complete Year 12.

Students in Year 11 were also asked to indicate the most important reason for returning to school. Overall, 49 per cent of the students in the sample noted 'I need to complete Year 12 for my future career' as the most important reason for returning to school. The statement rated as most important by the next greatest percentage of students was 'another year at school could help me get a job'. It was considered the most important reason by 21 per cent of students in the sample.

Sex Differences

The second and third columns of Table 6.1 show the mean ratings given by male and female Year 11 students to reasons for returning to school. As was reported in relation to Year 10 students considering a return to school, school satisfaction factors (enjoy school, school work is interesting, and doing well in school work) were rated as more important by females than by males. This finding was also suggested in a study of Victorian High Schools (Ainley et al., 1984) and is one to which we will return in later sections of the report. Long-term career requirements were also rated more strongly by female than male students.

Male students in Year 11 rated more strongly than females the non-availability of apprenticeships, and slightly more strongly than females not being able to find a job that they liked. Even though this was consistent with the responses of Year 10 students in relation to apprenticeships it was not consistent with those data regarding employment factors in general. Among Year 10 students who were considering a return to school, female students tended to give slightly higher ratings than male students to general job market (non-apprenticeship) factors. It was also observed that those Year 10 students considering staying at school rated job availability more strongly than did the Year 11 students looking back on that decision. For the Year 11 students in general, job market factors were relatively unimportant, but, for the Year 10 students considering staying at school, those factors were nearly as important as the school factors. As noted above, a possible interpretation of this apparent inconsistency is that the Year 10 students considering staying at school included students who were undecided and who might not actually have continued with their formal schooling.

System Differences

The mean ratings of student responses from high and low retention systems are to be found in the fifth and sixth columns of Table 6.1. In most cases, the response differences between the two types of system were due to a higher rating being given by high retention system students. The one exception concerned the influence of career requirements ('I need to complete Year 12 for my future career') on the decision to stay at school. In the education systems where retention to Year 11 was relatively high (over

70 per cent apparent retention), the most strongly rated reason for returning to school was 'another year at school could help me get a job'. In those systems where retention to Year 11 was relatively low (60 per cent or less), the most strongly rated reason for returning to school was 'I need to complete Year 12 for my future career'. It seemed that in the lower retention systems there was a stronger emphasis among Year 11 students on longer-term career requirements.

There were several items in the job market, utility and advice categories for which Year 11 students from high retention systems recorded higher mean ratings than students from low retention systems. These items concerned the lack of job and apprenticeship opportunities, the advisability of more schooling in terms of employment prospects and parents' and teachers' recommendations as reasons for staying at school. These findings seemed to indicate, as did the Year 10 findings, that students in high retention systems were inclined to believe that extra schooling would be an asset in the labour market, and that this belief was reinforced by the opinions of parents and teachers. In addition to these overall results regarding mean ratings, some of the differences between the systems in the factor nominated as most important in deciding to stay at school were of interest. For the systems in which Year 11 and Year 12 were less strongly linked (Victoria and South Australia), fewer students gave 'I need to complete Year 12 for my future career' as the most important reason and more students gave 'another year of school could help me get a job' as the most important reason, than in the States where Year 11 and 12 were closely linked. Students in Victorian technical schools gave a different pattern of responses to those in other systems. As noted earlier, that system has, until recently, not provided a Year 12 course of study, and in 1983 such a course was only available in about one-third of technical schools. Accordingly, 'I need to complete Year 12 for my future career' was not rated as most important by as many students as in other systems. Among students in Victorian technical schools, the most important reason for returning to school was 'another year at school would help me get a job' but a substantial number (18 per cent) considered the most important reason was 'I could not get an apprenticeship'.

Net Effects of Student and System Characteristics

The sections above have considered the ratings given to various reasons for returning to school by the total sample of Year 11 students, and differences in ratings between males and females as well as between different types of education system. This section examines differences in the ratings given according to other characteristics such as socioeconomic background, perceived ability, and ethnic background. To do this, regression analyses were conducted using the rating given to each of a series of reasons for staying at school as the dependent variables and a series of independent variables. The independent variables were as follows:

Table 6.2 Net Effects of Student Characteristics on Reasons for Returning to School among Year 11 Students[ab]

Reason	System	Sex	SES	Perceived ability	Ethnicity		Mult. R
					Eng.	N-Eng.	
Job market							
I could not find a job I liked	-.09(-.21)	-.05(-.11)	-.08(-.05)	-.15(-.22)	-.02	-.02	.22
I could not find any kind of job	-.10(-.21)	-.04	-.11(-.08)	-.19(-.25)	-.03	-.08(-.19)	.26
I could not get an apprenticeship	-.10(-.22)	-.25(-.52)	-.10(-.06)	-.16(-.22)	-.02	-.01	.33
Satisfaction with school							
School work is interesting	.00	.09(.17)	-.01	.17(.20)	.02	.06(.13)	.20
I enjoy school	.02	.15(.30)	-.01	.17(.22)	.00	.06(.14)	.24
I do well in my school work	.00	.07(.11)	-.01	.31(.35)	.01	.05(.11)	.32
Utility							
I need to complete Year 12 for my future career	.20(.52)	.10(.25)	.11(.08)	.24(.40)	.02	.06(.18)	.36
I could do subjects that are useful	-.04	-.03	-.01	.06(.07)	.02	.04	.09
Another year at school could help me get a job	-.21(-.48)	.02	-.03(-.02)	-.09(-.12)	.01	-.06(-.15)	.24
Advice							
My parents wanted me to stay at school	-.11(-.23)	.01	-.00	-.07(-.09)	-.01	.04	.15
My teachers thought I should stay at school	-.06(-.11)	.03	.02	.11(.13)	.01	.01	.13
Most of my friends stayed at school	.01	.01	.00	-.02	-.01	-.03	.04
Financial assistance							
I get a SAS allowance	-.02	-.02	-.08(-.03)	-.10(-.09)	.01	.05(.09)	.15

Note: Data have been weighted to reflect the size of the government school population in each State and a design effect factor of 3.5 has been used in calculating significance level.

[a] Standardized coefficients have been shown together with metric coefficients in brackets where the effect is significant at the five per cent level.

[b] Coefficients underlined significant at the five per cent level.

N = 6516

(a) System was a dichotomous variable coded as 1 for systems which retained more than 70 per cent of their students to Year 11, and 2 for systems which retained 60 per cent or fewer of their students to that level.

(b) Sex was a dichotomous variable with males coded as 1 and females coded as 2.

(c) Socioeconomic status was based on father's occupation coded initially on the 16-point ANU scale (Broom et al., 1977) but collapsed to the 6-point scale. Higher scores indicated higher levels of socioeconomic status.

(d) Perceived ability was the students rating of their ability on a five point scale from 'a lot below average' to 'a lot above average'.

(e) Ethnic background was captured as two dummy variables based on the father's country of birth. The first referred to a non-English speaking background. On this variable, students whose fathers were born in a non-English speaking country were coded as 1 relative to others coded as 0. The second referred to an English speaking (non-Australian) background. On this variable, students whose fathers were born overseas in an English speaking country were coded as 1 relative to others coded as 0. Australian background students were the excluded group in this set of dummy variables.

The results of these analyses indicate the strength of the associations between the ratings given and the characteristics being considered, when the other factors included were held constant. Table 6.2 contains the standardized coefficients, used for comparisons of effect size in the one equation, and metric coefficients, used for comparisons of the same independent variable in different equations. In addition, Table 6.2 records the multiple correlation coefficient which provides an indication of how much of the variance in ratings could be interpreted as arising from the factors listed.

The effects of type of system and sex differences have been discussed as part of Table 6.1. For each of these two factors the patterns of results reported from the present analysis (Table 6.2) were similar to those discussed previously. In addition, associations were found between reasons for returning to school and other student characteristics. These results can be summarized as follows.

System. Mean ratings given by students from high retention systems were higher (more important) than mean ratings given by students from low retention systems in job market factors (for example, 'I could not get any kind of job'), in some factors related to utility ('another year at school could help me get a job' and 'I could do subjects that are useful') and in the advice proferred by parents and teachers.

Sex. Female students rated as more important than did male students school factors (for example, 'I enjoy school') and long term career factors ('I need Year 11 or 12 for my future career') as reasons for returning to school. By contrast, male students

rated job market factors ('I could not get a job that I liked') as more important than did female students.

Socioeconomic background. Other things equal, students from lower socioeconomic status backgrounds rated job market factors more highly as reasons for returning to school than did students from higher socioeconomic backgrounds. Students from higher socioeconomic status backgrounds tended to give greater importance to future career requirements. Students from lower socioeconomic status backgrounds tended to give a higher importance rating to assistance under the Secondary Allowance Scheme. This could have been because a larger proportion of these students were in receipt of this assistance or because this scheme was more important to those who received it in these categories. The effects of the secondary allowance scheme will be considered in a later section.

Perceived ability. Students who rated themselves as more able tended to place greater emphasis on school factors (for example, 'I enjoy school'), future career requirements, and advice from teachers than did their peers who rated themselves as less able. Students who rated themselves as less able placed greater emphasis on job market factors.

Ethnic background. Students of an English-speaking migrant background did not give different ratings to any of the reasons for returning to school than students of Australian-born parents. Students from a non-English-speaking background differed only slightly from those of an Australian-born background in giving marginally higher ratings to the importance of school factors concerned with satisfaction (for example, 'I enjoy school'), career requirements (for example, 'I need to complete Year 12 for my future career', and to the receipt of assistance under the Secondary Allowance Scheme allowance.

In Summary

Even though it was generally true that Year 11 students rated personal investment factors as more important in their decision to return to school than satisfaction with school, the advice of others, or job market factors, there were important differences among students. Students differed according to their sex, socioeconomic, and ethnic background as well as their perceived ability and the type of education system in which they were enrolled. To take but two examples, consider the influence of sex and ethnic background. It was evident that female students placed greater emphasis on school factors than male students but less on immediate job market considerations. This finding was consistent with the results of a study in Victorian High Schools (Ainley et al., 1984) which was then interpreted in terms of the theories of Gilligan (1982). Gilligan proposed that in making decisions men tended to emphasize 'individualism' in that individual

actions were separated from networks or relationships, whereas women tended to emphasize 'connectedness' through which those relationships assumed greater importance. It was also evident that students of a non-English-speaking background placed slightly greater emphasis on satisfaction with school, and on career requirements than did students of Australian background. As suggested by Williams et al. (1980), students of a non-English-speaking background may see schooling as a route to upward social mobility. The data presented here suggested that such a vision may have been also influenced by the quality of the school experience provided.

As additional illustrations of the differences among students it seemed that job market considerations were more important for students who considered themselves less able than for their peers who rated their ability highly, and more important for lower socioeconomic categories than for higher socioeconomic categories. Students of higher perceived ability also placed greater emphasis on school factors and long-term career requirements than those of lower perceived ability.

Comparing students from high retention systems with low retention systems it was noted that the former group placed greater importance on job market factors, on more immediate utility factors ('another year at school could help me get a job'), and on the advice received from parents and teachers. Students from the low retention systems placed greater importance on the more traditional reason for returning to school: future career requirements. It seemed that the high retention systems might have been retaining a wider range of students, some of whom were influenced by the lack of job opportunities and who hoped that the school programs offered would prove useful in that respect.

Students who Did Not Plan to Continue

A small percentage of Year 11 students, around six per cent, indicated that at the end of Year 10 they had not planned to return to school. In Table 6.3 the mean ratings given to various reasons for returning to school by those students have been recorded together with the ratings given by the students who had planned to return. In addition to recording mean ratings, the adjusted difference in means has been recorded after making allowance for the influence of socioeconomic background, ethnic background, perceived ability, sex, receiving an SAS allowance, and the type of course entered. From Table 6.3 it seemed that there were several areas in which students who had not planned to return to school differed from those who had. Generally those who had not planned to return to school placed greater emphasis than their peers on job market factors and less emphasis on long-term career requirements, school factors, or the advice of parents and teachers. They also placed slightly greater emphasis on the SAS than those who had planned to

Table 6.3 Reasons for Continuing at School by Year 11 Students who Did Not Plan to Return to School

Reason	Mean rating: Planned to return	Mean rating: Did not plan to return	F value[a]	Net effect[bc] (metric coefficients)
Job market				
I could not find a job I liked	1.67	2.56	245.5	.76
I could not find any kind of job	1.52	2.27	200.1	.59
I could not get an apprenticeship	1.54	2.54	330.5	.81
Satisfaction with school				
School work is interesting	2.19	1.84	54.7	-.28
I enjoy school	2.24	1.80	72.4	-.34
I do well in my school work	2.83	2.35	107.4	-.35
Utility				
I need to complete Year 12 for my future career	2.93	1.89	253.5	-.78
I could do subjects that are useful	3.02	2.75	29.2	-.27
Another year at school could help me to get a job	3.06	3.01	0.6	-.11
Advice				
My parents wanted me to stay at school	2.84	2.68	9.1	-.20[d]
My teachers thought I should stay at school	1.70	1.51	16.7	-.15
Most of my friends stayed at school	1.82	1.84	0.8	-.01
Financial assistance				
I get an SAS allowance	1.25	1.47	32.8	.14
Number of students (valid responses)	5966	373		

Note: Data have been weighted to reflect the size of the government school population in each State.

a Values underlined indicate a difference significant (after allowing for a design effect factor of 3.5) at the five per cent level.

b Allowance made for the effect of socioeconomic background, ethnic background, sex, perceived ability, whether under the Secondary Allowance Scheme, and whether an alternative course.

c Coefficients underlined were significant (after allowing for design effects) at the five per cent level.

d Coefficient of borderline statistical significance.

N = 6516

return to school. For both groups of students, the two most important reasons were the belief that 'another year at school could help me get a job' and 'I could do subjects that are useful'. On this basis it seemed appropriate to qualify the observed stronger influence of job market factors on some of this group of students than others with the observation that what was seen to be available at school (in the sense of usefulness) could also have been an important factor for others in the group when deciding to return to school. Even among this group there was not a significant association between the ratings given to 'not being able to obtain a job' and 'I could do subjects that are useful'.

Students in Alternative Courses

One of the ways some schools have responded to the wider range of interests among students continuing to Year 11 has been the provision of programs designated as 'alternative' courses. This term can have a variety of meanings but usually involves a structure less closely geared to the requirements of continuing academic study, and different approaches to teaching (see Campbell and McMeniman, 1983). A further major problem in the use of the term is the implication that the course is designated as a separate entity. It would be possible, for example, for a school to incorporate many of the features of an alternative course in its curriculum at Year 11 without applying such a formal designation, for instance through the provision of a wide range of subjects.

With these caveats in mind, the importance ratings given to various reasons for returning to school by students who indicated that they were in 'alternative' courses at Year 11 were compared with those given by students who did not apply that designation. The results have been shown in Table 6.4. As with Table 6.3, mean ratings have been shown together with the net difference in means after adjusting for the effects of other differences in student and system characteristics.

In terms of reasons for returning to school, students who indicated that they were enrolled in 'alternative' courses gave higher importance ratings to job market factors, to the influence of parents and friends, and to being able to do useful subjects. The alternative course students also gave higher mean ratings to the importance of the SAS allowance, probably because a greater proportion of these students were receiving assistance under that scheme. Students from alternative courses rated future career requirements which depended on Year 12 as less important than their peers from other courses. There was no difference in the importance accorded to school satisfaction factors between students who indicated that they were in alternative programs and other students who were in more traditional programs.

In brief the students who indicated that they were enrolled in an alternative program at Year 11 were students who placed greater importance on job market consideration in returning to school, greater importance on the utility of the subjects

Table 6.4 Reasons for Continuing at School by Students in Alternative Courses at Year 11

Reason	Mean rating: Not an alternative course	Mean rating: Alternative course	F value[a]	Net effect[bc] (metric coefficients)
Job market				
I could not find a job I liked	1.66	2.12	95.1	.36
I could not find any kind of job	1.49	2.05	162.3	.46
I could not get an apprenticeship	1.52	2.21	220.1	.54
Satisfaction with school				
School work is interesting	2.18	2.16	0.1	.05
I enjoy school	2.22	2.19	0.6	.05
I do well in my school work	2.82	2.69	11.0	-.04
Utility				
I need to complete Year 12 for my future career	2.97	2.07	262.6	-.72
I could do subjects that are useful	2.99	3.15	14.2	.18
Another year at school could help me to get a job	3.04	3.19	9.4	.13
Advice				
My parents wanted me to stay at school	2.81	3.01	21.3	.21
My teachers thought I should stay at school	1.68	1.73	1.1	.08
Most of my friends stayed at school	1.80	2.01	26.7	.21
Financial assistance				
I get an SAS allowance	1.23	1.55	102.4	.24
Number of students (valid responses)	5063	538		

Note: Data have been weighted to reflect the size of the government school population in each State.

a Values underlined indicate a difference significant (after allowing for a design effect factor of 3.5) at the five per cent level.

b Allowance made for the effect of socioeconomic background, ethnic background, sex, perceived ability, whether under the Secondary Allowance Scheme and whether student intended to return to school.

c Coefficients underlined were significant (after correcting for design effects) at the five per cent level.

N = 6516

Table 6.5 Percentage of Year 11 Students in Government Schools Receiving Various Sources of Financial Support[a]

	ACT	Vic. High	Vic. Tech.	Qld	SA	WA	Tas.
Secondary Allowance Scheme (SAS)	11	17	19	22	22	19	24
Other scholarship or award	4	2	3	3	2	4	5
Part-time job	36	30	36	42	30	34	24

[a] A publication by the CDEYA (1984) indicated that about 45,558 students in Years 11 and 12 received support under the SAS during 1983. Total enrolments in Years 11 and 12 for 1983 were estimated as 240,700. This corresponds to about 19 per cent of students from Years 11 and 12 being in receipt of assistance under SAS. However, the figure would be expected to be a little higher in government than non-government schools.

available, and less importance on long-term career requirements than their peers in other courses. The two most highly rated reasons for returning to school by students in alternative courses were a belief that another year at school could help in obtaining a job and the feeling that they could do subjects which were useful.

The Secondary Allowance Scheme

Even though the present study was not primarily concerned with sources of financial support, one question asked students to indicate whether they were financially supported under the Secondary Allowance Scheme (SAS). As many students might not have known about the scheme a 'don't know' response was allowed, but the analyses treated 'don't know' as indicating that the student's family did not receive the allowances. Table 6.5 contains details of the percentage of Year 11 students in each system indicating that they were supported under this scheme. Of the total sample, just under 20 per cent indicated that the Secondary Allowance Scheme applied to them. The footnote to Table 6.5 provides some evidence that the response to this question from the sample reflected the proportion of students supported by the Secondary Allowance Scheme in Years 11 and 12 in the total population.

The Secondary Allowance Scheme provides means-tested benefits to lower income families to help them keep their children at school for the final two years of secondary school. It was introduced by the federal government in 1974 after the cessation of the Commonwealth Senior Secondary Scholarship, in an attempt to promote greater equality of educational opportunity among young people. Apart from satisfying a means test of parental income to be eligible for the SAS, students must be under 18 at the beginning of Year 11 and under 19 at the beginning of Year 12, and undertaking full-time studies. The student's personal income is not subject to a means test. The allowance is paid

direct to the parents, and does not preclude the payment of a family allowance. An annual income level was designated for qualification for maximum benefits; parents with an income level up to several thousand dollars above the maximum benefit level qualify for a reduced benefit, calculated according to level of income. Over the years 1980 to 1983, the annual maximum allowance increased from $550 to $1046 and the adjusted parental income levels that qualified for maximum benefits increased from $6200 to $12,982 (CDEYA, 1984a). At the inception of the scheme in 1974, approximately 9000 students were granted an allowance; at June 1983, about 45,000 students received assistance (a considerable increase on the preceding year) at a cost of some $29 million (CDEYA, 1984). Both the amount of the allowance and the number of students receiving it have increased steadily over the past decade, with a marked expansion between 1982 and 1983.

In 1978, the Commonwealth Department of Education commissioned a research study to evaluate the Secondary Allowance Scheme and a report on the study was published in 1982 (Meade, 1982). There were two data bases for the study: the data already collected in a study of 3043 Sydney high school students (96 of whom received an SAS award), and that collected for 1509 Year 10 students in five Queensland schools (61 of whom received an SAS award). Data for the latter study was collected during 1979 and 1980 by means of questionnaires and interviews, involving the students and their parents. About half the SAS students came from one-parent families. The proportion of SAS parents who desired tertiary education for their children was the same as for the parents of non-SAS students, and overall there was a high degree of concurrence between parent and student aspirations. Compared to other Year 10 students, the SAS students spent more time studying and doing homework. SAS students were more likely to aspire to complete Year 12 than non-SAS students, and they produced slightly higher results at the end of those years than the non-SAS students. Among SAS students, the most academically successful were those from non-English-speaking backgrounds. The survey of parents showed that most parents were strongly supportive of the SAS, whether they qualified for the award or not. Of 27 parents interviewed, 20 indicated that receipt of the SAS grant had not influenced their decision to allow their children to stay on at school - without the grant, they would have made personal sacrifices to keep the children at school. The initial survey of Year 10 students in the Queensland study revealed that 90 per cent of students did not know about the SAS. The research team reported that subsequent knowledge of SAS 'did little to change their educational plans which we found had been resolved at a much earlier stage in their schooling than Year 10' (Meade, 1982:29). Advantages of the scheme identified by SAS parents were: 'assistance with expenses, a good emergency fund and saving the children from worrying about financial strain' (Meade, 1982:36). About 80 per cent of the parents said they used the funds directly for school needs, in particular for school trips and extra-curricular activities.

Table 6.6 Proceeding to Year 11 and the Secondary Allowance Scheme

Planned to return to school at the end of Year 10	Supported by SAS		Total
	Yes	No	
Yes	18.0	76.3	94.4
No	1.2	4.4	5.6
	19.3	80.7	100.0

Note: Percentages represent weighted values to allow for different sampling fractions between States.

Chi Square = 1.73 with 1 df, p = 0.19

In summary, Meade suggested that the Secondary Allowance Scheme probably had little influence on the plans of students, or the plans of parents for their children, to stay on at school. The present study gathered two pieces of data relevant to this issue. The first referred to whether students in Year 11 during 1983 had planned to return to school and whether a change in plan was associated with receipt of assistance under the Secondary Allowance Scheme. The second piece of relevant data concerned the importance of the SAS allowance among the various reasons for returning to school.

Table 6.6 provides an indication of the association between students being supported under the Secondary Allowance Scheme and their not having planned to return to school at the end of Year 10. There was no statistically significant association between the variables. Nor was any significant association evident when the analysis was performed separately for each of six levels of socioeconomic status or for those who gave no basis on which to assess socioeconomic status (e.g. the father was unemployed, retired, deceased, or the question was not completed in a way which could be coded). When the analysis of the association between receiving the secondary allowance scheme and not having planned to return to school at the end of Year 10 was conducted separately for each State, the association was statistically significant only in Queensland.

Reasons for Returning to School

Table 6.7 records the importance ratings accorded to various reasons for returning to school for students under SAS and those not under SAS. The data recorded have been weighted to allow for different sampling fractions in each State and thus they reflect the distribution of the school population across the States involved. In addition to recording these data, Table 6.7 also records the effective difference in mean ratings after adjustment had been made for differences in background characteristics, between SAS and non-SAS students. Receiving support under the Secondary Allowance Scheme was associated with socioeconomic status as measured by father's occupation (and especially where father's last occupation was not listed in a form to which an occupational code could be assigned) and other background factors. Hence, part of the explanation for the

Table 6.7 Importance of Various Reasons for Returning to School Broken Down by whether Students Received Assistance Under SAS

Reason	SAS allowance (unadjusted)						Adjusted effects[a]		
	Mean ratings[b]				Probability			Probability	
	No	Yes	Diff.	F. ratio	Raw	Corr.[c]	Diff.	Raw	Corr.[c]
Job market									
I could not find a job I liked	1.70	1.80	.10	8.7	.003	n.s.	.07	n.s.	n.s.
I could not find any kind of job	1.53	1.66	.13	16.5	.001	<.05	.10	.004	<.05
I could not get an apprenticeship	1.58	1.63	.05	2.2	n.s.	n.s.	.03	n.s.	n.s.
Satisfaction with school									
School work is interesting	2.16	2.22	.06	4.1	.04	n.s.	.06	.04	n.s.
I enjoy school	2.20	2.27	.07	6.0	.01	n.s.	.07	.02	n.s.
I do well in my school work	2.80	2.83	.03	1.1	n.s.	n.s.	.05	n.s.	n.s.
Utility									
I need to complete Year 12 for my future career	2.89	2.83	-.06	2.2	n.s.	n.s.	-.01	n.s.	n.s.
I could do subjects that are useful	2.98	3.05	.07	5.8	.02	n.s.	.08	.02	n.s.
Another year at school could help me get a job	3.07	2.99	-.08	5.3	.02	n.s.	-.10	.006	<.05
Advice									
My parents wanted me to stay at school	2.84	2.81	-.03	0.8	n.s.	n.s.	-.05	n.s.	n.s.
My teachers thought I should stay at school	1.68	1.68	.0	0.1	n.s.	n.s.	.01	n.s.	n.s.
Most of my friends stayed at school	1.83	1.80	-.03	0.6	n.s.	n.s.	-.02	n.s.	n.s.
Financial assistance									
I get a SAS allowance	1.10	2.00	0.9	53.6	.001	<.001	.9	<.001	<.001

Note: Data have been weighted to reflect the government school population in each State.

a Adjusted for socioeconomic status, ethnicity, sex, and perceived ability.

b Ratings based on a scale of 4 = very important, 3 = fairly important, 2 = slightly important, and 1 = not at all important.

c Corrected for clustering in the sample assuming a design effect factor of 3.5.

N = 6516

differences observed in mean ratings could arise from the difference in student background between those supported by the Secondary Allowance Scheme and those not supported by it. To allow for this, a regression analysis was conducted for each of the 14 possible reasons for remaining at school, using the importance ratings as criteria and several background characteristics as predictor variables: whether the student received assistance under SAS, socioeconomic status, ethnic background, sex, and perceived ability. The adjusted differences in means have been shown in Table 6.7 together with the unadjusted differences.

From Table 6.7 it can be seen that the main area in which SAS students differed from non-SAS students was in the importance attached to not being able to get a job. Students receiving assistance under SAS accorded greater importance to not being able to get a job than did non-SAS students (see Table 6.6). This difference remained even after adjusting for the influence of other social characteristics associated with being SAS students. A possible interpretation could be that SAS was tending to assist students who in other labour market circumstances may have sought employment. In addition, SAS students accorded less importance than non-SAS students to 'another year at school could help me get a job'. However, they tended to regard 'doing subjects that are useful' as more important than did non-SAS students. The first of these results is difficult to interpret, but perhaps reflects greater pessimism among students who returned to school because they could not find a job. Two possible interpretations of the second result could be that it reflects a motivational effect suggested by Meade (1982) or that it reflects a greater proportion of SAS students in 'alternative' programs at Year 11.

Two reasons for returning to school - 'I enjoy school' and 'school work is interesting' - tended to be rated as more important by SAS than non-SAS students. The differences appeared significant for the sample but were not significant when an allowance was made for clustering in the sample design. The two possible interpretations advanced in relation to 'useful' subjects could also apply in this case.

The Importance of SAS in Returning to School

The data in Table 6.7 show that while the Secondary Allowance Scheme was, as would be expected, not at all important to those not receiving it, on average it was rated as 'slightly' important by those who were getting it. In comparison to other reasons, receiving an SAS allowance ranked about the middle of the reasons listed: more important than the availability of a job or the plans of friends but less important than utility or school factors. Of those students in receipt of a SAS allowance some 16 per cent considered the allowance was very important in their decision to return to school, 14 per cent indicated it was fairly important, 23 per cent said that it was slightly important and 47 per cent said that the allowance was not important.

Table 6.8 Ratings of the Importance of the SAS Allowance in the Decision to Return to School Broken Down by Socioeconomic Status (Percentages recorded)[a]

Rating	Socioeconomic status (father's occupation)			
	Unclassified	Unskilled/ semi-skilled	Skilled/ clerical	Managerial/ professional
Not at all important	31	47	48	57
Slightly important	27	23	20	24
Fairly important	19	13	14	12
Very important	23	17	19	9
Total	100	100	100	100
Number of valid cases	215	334	301	334

[a] Based on weighted data to reflect distribution of student numbers across the States involved.

For those assisted under the SAS there was no difference in the importance of that allowance between students of different ethnic background but there were differences between students from different socioeconomic backgrounds. There was a greater proportion (42 per cent) of students who said the SAS was fairly important among those who gave no codeable response for father's last occupation, than among those whose father's last occupation was classified as managerial or professional (20 per cent). Details have been shown in Table 6.8. It is difficult to interpret the uncodeable or missing responses to the question on father's occupation, but it seems reasonable to assume that a substantial proportion were students from single-parent families. In addition, in examining the managerial and professional categories it needs to be remembered that the question referred to the last occupation of the father. It is possible that some of these were currently unemployed. It appeared that even though the SAS was rated generally as slightly important in terms of returning to school by recipients in general, there were some students to whom it was fairly or very important. Overall the SAS was rated as very important by about three per cent of the Year 11 sample.

In addition, among SAS recipients the scheme was rated as more important by those who had not planned to return to school than by those who had already planned to return to school. As shown in Table 6.9, the SAS was rated as 'very important' by about one-third of the recipients who had not planned to return to school but only by about one-seventh of recipients who had planned to return to school. This difference could reflect, among other things, the possibility that students became aware of or applied for the SAS allowance at different times.

It is difficult to estimate the contribution of SAS to increased retention rates both because of the nature of the data and because any impact of SAS is not independent of the influence of the job market and school factors. Only very rough estimates are

Table 6.9 Ratings of the Importance of the SAS Allowance in the Decision to Return to School Broken Down by whether the Student Previously Planned to Return to School

Rating	Previous intention (percentages)		
	Return	Not return	Total
Not at all important	48	35	47
Slightly important	23	18	23
Fairly important	14	13	14
Very important	15	34	16
Total	100	100	100
Number of valid cases	1092	75	1167

Note: Data have been weighted to reflect the size of the government school population in each State.

Chi Square = 17.76 with 3 d.f. P(corrected) < .05

possible. First, a little over one per cent of the Year 11 students indicated that they received SAS and had not planned to return to school at the end of Year 10. Thirty-four per cent of these students suggested that SAS was very important in their decision to actually return to school. Hence, this group could account for only about 0.4 per cent of those in Year 11. In addition, some 18 per cent of Year 11 students received SAS and had planned to return to school at the end of Year 10. Fifteen per cent of this group said that SAS was very important in the decision to return to school. Hence this group could account for an additional 2.7 per cent of those in Year 11.

If it is assumed that those students would not have returned to school in the absence of SAS and that the average progression from Year 10 to Year 11 was 64 per cent, it would appear that SAS could have contributed to between one third and two percentage points in retention rates from Year 10 to Year 11 (but the basis for these estimates is very rough). Moreover SAS was not a new program in 1983 but merely an expanded program, and consequently the contribution of its greater availability to increased retention from Year 10 to Year 11 would probably have been even less than this. In brief, the increased availability of SAS may have contributed a little towards increased retention but it would not have accounted for all of the increased retention from Year 10 to Year 11.

Other Characteristics of SAS Students

As would be expected, SAS students tended to be drawn from lower socioeconomic status backgrounds as indicated by their fathers' last occupation. Indeed, the category with greater percentage of SAS students was that for which socioeconomic background could not be classified. Because the information was based on the father's last occupation, the classified categories did not take into account whether the father was living at home, or whether the father was currently unemployed.

There were also differences in the percentages of students of different ethnic backgrounds. Twenty-three per cent of students from a non-English-speaking background were assisted by SAS compared to 17 per cent of students from an English-speaking background and 18 per cent of students from an Australian background. In addition, about 31 per cent of the SAS recipients had a part-time job which was not significantly different from the 32 per cent of other students who held part-time jobs.

SAS students did not differ from non-SAS students in terms of their intention to complete Year 12. For both groups about 63 per cent of students planned to complete Year 12 in secondary school.

In Summary

The present study was not primarily designed to examine the impact of the Secondary Allowance Scheme. However, it did provide some indications of the operation of that scheme with regard to staying at school. Even though the scheme did not generally appear to have a strong influence on a decision to return to school it did appear to be important for some groups of recipients. It was more important for recipients of lower socioeconomic background and for students who at the end of Year 10 had not planned to return to school. This appeared to be linked to returning to school because no job was available. The availability of SAS would not have accounted for all of the increased retention to Year 11 in 1983, but it may have contributed to some of that increase. SAS recipients were drawn more heavily from lower socioeconomic backgrounds (especially where the data was not available) and from non-English-speaking backgrounds.

Intentions for 1984

Table 6.10 contains information about what the 1983 group of Year 11 students planned to do in 1984. Overall, just under two-thirds indicated that they would do Year 12 either at the same school or another school. There were differences between education systems with 93 per cent of Australian Capital Territory students indicating an intention to proceed to Year 12 but only 20 per cent of students in Victorian technical schools stating that intention. In those schools, the large percentage (nine per cent) indicating that they would do Year 12 at another school reflected the position where not all schools in that system provided courses of study at Year 12. In general, the differences between systems reflected the current patterns in progression rates. Systems in which Years 11 and 12 were closely linked (e.g. Queensland, Tasmania, the Australian Capital Territory, and to a lesser extent, with the advent of non-Certificate of Secondary Education courses, Western Australia) recorded higher proportions of students proceeding to Year 12 than other States.

Table 6.10 Year 11 Students' Intentions for 1984 (Percentages)

	ACT	Vic. High	Vic. Tech.	Qld	SA	WA	Tas.
Look for a job	2	11	26	5	16	13	13
Do Year 12 at same school	93	61	11	83	54	69	75
Do Year 12 at another school	1	3	9	2	2	2	4
Take an apprenticeship	2	5	34	4	14	5	2
Do a Technical and Further Education (TAFE) course	1	11	13	3	3	5	1
Other[a]	1	8	8	4	11	5	5

[a] See text for a discussion, this category often involved two or more contingent responses.

Around 12 per cent of the sample planned to look for a job, with the remainder listing an intention to take an apprenticeship, do a TAFE course, or undertake some other activity.

Some six per cent of the total sample of students indicated other intentions for 1984. For South Australia, where the 'other' category totalled 11 per cent of respondents, an analysis suggested most of those respondents could be allocated as follows:

- some TAFE program (about half of one per cent)
- business college (a little more than one per cent)
- undecided or mixed response (two per cent)
- another activity; not really study (one per cent)
- repeat Year 11 at the same or another school (two and one-half per cent)
- do Year 12 at the same or another school with some qualification such as a special program and/or 'if can't get a job', and/or 'look for a job at the same time' (a total of about three and one-half per cent).

Respondents indicating 'other' from the remaining States showed a similar pattern to that in South Australia.

Students' stated intentions to proceed to Year 12 appeared to be linked to other characteristics of the students and the nature of their course at Year 11. To investigate this further, an analysis based on the model in Figure 6.1 was conducted. The relationships were then investigated with a series of multiple regression analyses. The variables in the model were defined as follows:

(a) Intention was the student's stated intention to return to school to study at Year 12 level coded as 1 (Yes) or 0 (No).

(b) Socioeconomic status was based on father's occupation coded on the ANU 6-point scale (Broom et al., 1977).

Table 6.11 Results of Regression of Intention to Return to Year 12 on School and Student Variables[a]

Independent variables	Dependent variables: SAS assistance		Alternative course		Plan to do Year 12	
	Metric	Standardized	Metric	Standardized	Metric	Standardized
Sex	.04	.05	-.02	-.03	.05	.05
Socioeconomic status	-.02	-.09	-.01	-.05	.02	.06
Non-English background	.05	.06	.00	.01	.01	.01
English background	.01	.01	.01	.02	.00	.00
Perceived ability	-.02	-.04	-.02	-.04	.13	.20
Not planned to return	.02	.01	.11	.09	-.27	-.13
SAS					-.01	-.01
Alternative course					.27	.17
Multiple R	.15		.20		.52	

Note: Data have been weighted to reflect the size of the government school population in each State and a design effect factor of 3.5 has been used to calculate levels of significance.

[a] Coefficients significant at the five per cent level have been underlined.

N = 5158

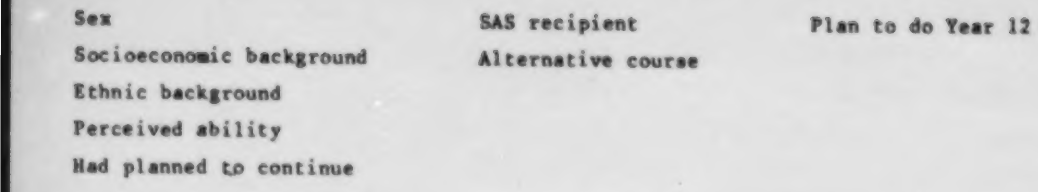

Figure 6.1 Model for Student Intentions to Proceed to Year 12

(c) Ethnicity was coded as two dummy variables, one representing a non-English-speaking background, and the other an overseas but English-speaking background. Each was coded as 0 or 1 with those of Australian background representing the excluded group.

(d) Sex was coded as 1 (male) or 2 (female).

(e) Perceived ability referred to the students' rating of their ability relative to their peers on a 5-point scale.

(f) Planned to return referred to whether the student had planned to return to school at the end of Year 10 and was coded as 1 (Yes) or 2 (No).

(g) Alternative course referred to whether students indicated that they were enrolled in an alternative course (1) or not (2).

(h) SAS allowance referred to whether the student was in receipt of assistance under SAS during 1983 and was coded as 1 (Yes) or 2 (No).

(i) System differences were coded in a set of five dummy variables. Those effects have not been reported here but the effects which have been reported are net of state differences.

The results of the analyses have been reported in Table 6.11 and are summarized here.

Alternative course. Other things equal, students in an alternative course were less likely to plan to proceed to Year 12 than those in other courses. Roughly the effect size (other things equal) was equivalent to 27 percentage points. However, it is also important to note that some 29 per cent of the students in alternative programs planned to remain at school to Year 12.

Secondary Allowance Scheme. There appeared to be no net effect of assistance under this scheme on an intention to stay at school to Year 12.

Sex. More females than males indicated an intention to proceed to Year 12. The size of the effect indicated that about five per cent more females than males planned to proceed to Year 12.

Ethnic background. There was no difference in the percentages of those planning to proceed to Year 12 between students of different ethnic backgrounds. It should be

noted that this result is not consistent with results found in Victorian high schools (Ainley et al., 1984) nor with other studies in recent years, which have suggested a greater propensity for those of a non-English-speaking background to remain at school longer. The inconsistency should prompt further research aimed at understanding this issue, and reasons for a possible change in views.

Perceived ability. Students who rated their ability more highly were more inclined to plan to continue at school to Year 12. This was the largest of the effects other than for differences between systems.

Planned to return. Students who had not planned to return to school for Year 11 were less likely (27 per cent fewer) to plan to proceed to Year 12.

In addition to these associations with planning to proceed to Year 12, associations with the mediating variables were also observed. First, students in alternative programs were more likely to have not planned to enter Year 11. Secondly, students who indicated they received assistance under SAS were of lower average socioeconomic status, and were more often of a non-English background.

In these data there were no surprising results except for ethnic background which was noted above. For technical reasons, a similar analysis could not be conducted for an intention to undertake an apprenticeship or another TAFE course, but the rough indications were that such an intention was more associated with males than females (10 per cent more), with being in an alternative program (11 per cent more), with lower perceived ability, and with a non-English-speaking background (four per cent more).

Further Study Plans

Students were also asked to indicate their plans for further study after leaving school, but not necessarily immediately after leaving school. Data concerning these intentions are shown in Table 6.12. The first column refers to those students who indicated that they planned to do Year 12 in 1984. About 22 per cent of these students planned no further study beyond school. The remainder divided between 68 per cent who were planning full-time study after leaving school and less than 10 per cent who planned further study on a part-time basis.

The second column in Table 6.12 refers to those students who indicated that they were not planning to do Year 12 in 1984. Of these students, 40 per cent planned no further study, with about 30 per cent planning some full-time study, and 29 per cent planning part-time study, usually in the form of apprenticeship training.

Table 6.12 Year 11 Students: Further Study Plans (Percentages)[a]

	Students planning to complete Year 12	Students planning to leave after Year 11
No further study	22	40
Further full-time study:		
University	35	3
College	17	3
TAFE (non-apprentice)	6	16
Other	9	6
Total further full-time study	68	30
Further part-time study:		
University	2	0
College	1	0
TAFE (non-apprentice)	2	2
Apprentice[b]	4	26
Other	1	1
Total further part-time study	10	29
Number of valid cases	3990	2526
Missing cases	214	164

[a] These data were not weighted to reflect population differences between States.

[b] Apprentices have been entered as part-time study regardless of the designation recorded by the respondent.

Students' Comments

There was some space allowed at the end of the Year 11 questionnaire for students to make 'any additional comments about school or your future plans'. Approximately one-third of the students responded to this request. The most common type of response, from at least half of the students who offered comments, was an elaboration of career and educational aspirations, which often included a description of alternative career paths that could be followed if a first choice proved unattainable. While some of these comments were little more than a repetition of information given elsewhere in the questionnaire, on the whole the impression gained was that these Year 11 students were seriously concerned about their career futures, and that, while maintaining their aspirations, they were realistic enough about the job market situation to acknowledge the need for alternative plans. A further five per cent of students were uncertain about future plans.

It was apparent from the responses that in some classes the students had discussed the 'additional comments' section, because the same suggestion would appear repeatedly in a cluster of questionnaires. Three issues that appeared in this way were: Year 12 students should be given allowances that were equivalent to dole payments; the HSC pass rate should be lowered; and the government should put more money into job creation.

The comments on school fell into three major categories: general approval or disapproval of school, and specific criticism of some aspects of school life. Roughly the same number of students (10 per cent) made positive comments of a general kind as made negative comments. Those students who said they enjoyed school sometimes gave supporting reasons, such as 'the courses help my future career', 'the school caters for students of different abilities', 'more education gives you a more mature outlook'. In the two systems that supported a senior college structure, a number of students spoke with enthusiasm of the college experience, which they felt was more rewarding than their junior high school experience.

School was described as 'boring', 'uninteresting', 'not worth it' by those students expressing general disapproval, although many added the rider that it was nevertheless necessary to stay at school to further their career plans.

Approximately one-quarter of the student comments concerned specific criticisms of the school. The two most frequently mentioned criticisms were of the workload at the senior level and the available subject choice. Comments on workload included mention of constant pressure, the demanding nature of the work, too much assessment, and the disadvantages of external examinations. As far as subjects in the post-compulsory years were concerned, students complained about the limited range of subjects, particularly the lack of practical subjects, humanities subjects, and alternative courses. Students wrote of the irrelevance of their subjects to their future lives in both personal and career terms. The following comments incorporate these major criticisms.

> I find school inadequate in regard to preparation for unemployment, limited finance, personal development. Exams feel unnecessary and are merely stress-pools with no clear reason as to why we do them. Lack of choice in our school leads to immaturity and indecisiveness.
>
> School doesn't give students a good look at what's outside in the world for them. How are we really to decide what we should do with ourselves if we don't know what to expect?
>
> More schools should teach more practical courses than at present to aid those students who are not academically inclined but who are unable to find full-time employment.

Other aspects of school which were criticized by students were the teachers (lack of enthusiasm, focus on good students only), and discipline and regulation (too much or too little).

Year 11 Students: A Summary

The retrospective views of Year 11 students on their reasons for deciding to stay at school were similar to the prospective views of Year 10 students who planned to stay on at school. Both groups rated utility factors as most important, followed by satisfaction with school and job market factors, whereas the intending early school leavers in the

Year 10 group gave the top rating to job market factors, followed by utility factors then satisfaction with school. For all groups, advice from other people was the least important influence.

The relative importance of various reasons given by Year 11 students for staying at school was associated with certain student characteristics. The need for qualifications, and satisfaction with school were more important to females than to males, to students from non-English-speaking backgrounds than to Australian-born students, and to students who rated themselves as more able than to students who rated themselves as less able. Job market factors meant more to the students who rated themselves as less able, and to students from lower socioeconomic backgrounds than to students from high socioeconomic backgrounds. The latter group placed greater importance on future career requirements.

Some consideration was given to the influence of the Secondary Allowance Scheme on students' plans. Of the students in Year 11 who received an SAS allowance (about 19 per cent of the total sample), just over half indicated that the allowance was of some importance (slightly, fairly or very important) in their decision to return to school, and just under half said that the allowance was of no importance. It was ranked at about the middle of the list of reasons. It was more important to students from a low socioeconomic background than from a high socioeconomic background.

Two-thirds of the Year 11 sample stated their intention to proceed to Year 12. This intention was more commonly found among females than males, among students in traditional rather than alternative courses, and among students whose rating of their ability was high rather than low. Surprisingly, in view of other research findings and the results in Chapter 4, ethnic background had no effect on intention to complete secondary schooling.

Three-quarters of the students who planned to do Year 12 indicated that they would continue with study after leaving school, mostly in a full-time capacity. Of those students who were not planning to return to school for Year 12, about 40 per cent did not intend to undertake further study, and the remainder were split evenly between full-time and part-time further study.

In the open-ended section of the questionnaire, students took the opportunity to comment on school and their future plans. Half the comments comprised descriptions of career and educational aspirations, and one-quarter of the comments concerned specific criticisms of school. The main focus of criticism was on the heavy workload at the senior level, and the limited range and irrelevance of the subject offering in Years 11 and 12.

CHAPTER 7

AN OVERVIEW

At the beginning of this report, attention was drawn to the quickened interest in, and discussion of, retentivity beyond the compulsory stages of secondary education. Interest in retentivity has tended to be concerned with either the school, social and economic factors which might be associated with different levels of retentivity, or with the form of the school curriculum which might be most appropriate when retentivity has increased. Broadly, the first of these concerns implies investigation of patterns which currently exist in schools, while the second goes beyond a study of the extant situation to a consideration of appropriate responses to an evolving situation. The present study was intended to inform debate about the first of these concerns, but with the view that a better understanding of present patterns might help inform responses in the future.

In reviewing previous research in Chapter 1, it was convenient to distinguish three potential influences on retentivity. These were the economic environment, the social-psychological environment, and the school environment. As a result of the study undertaken, it became evident that these three categories of influence were not so easily or neatly separated as was first envisaged. Consequently, in the design and analysis of the study, it was convenient to depart from the three categories used in Chapter 1. Despite this, it remained a useful scheme within which to summarize some of the main results of the study. Superimposed on this trichotomous classification of substantive influences on retentivity was a three-level design for the collection and analysis of data, with the three levels being the school system, the school, and the student. The main body of the report has been organized around these three levels of investigation. In presenting an overview it seemed appropriate to organize interpretations around the three categories of influence and in considering each category of influence draw upon evidence from each level of investigation and analysis.

The Economic Environment

In Chapter 1, two aspects of the economic environment were mentioned as relevant to any consideration of retentivity. One of those aspects which would be expected to impinge on the decisions of young people to remain at school was the availability of jobs. The other aspect was the availability of financial support.

Employment Prospects

The recent increases in retentivity have been widely attributed to a decline in the availability of jobs for young people. Even though this assumption would appear to be

plausible, it deserves scrutiny, for it might not provide a complete explanation. During the late 1950s and 1960s there was an increase in retentivity which was not associated with a decline in job availability or a rise in unemployment. Fitzgerald (1970) noted that the percentage of 16-year-olds in full-time school grew from 25 per cent in 1956 through 29 per cent in 1960 to 48 per cent in 1968. Moreover, that increase was largely a result of increased holding power in government schools and differed between States. It was in Victoria and South Australia that the increase in retentivity to the second last year of secondary school was greatest, so that by 1968 in those States a little over one half of the cohort remained to that stage, whereas elsewhere in Australia a little less than one-third remained (Fitzgerald, 1970:26-27). During the middle 1970s to early 1980s the availability of jobs for young people declined and youth unemployment increased (see CTEC, 1982:32-34). Over the same period, the increases in retentivity in schools were modest. Australia-wide retention rates to Year 12 increased from 32 per cent in 1972, through 35 per cent in 1976, to 36 per cent in 1982. At Year 11 the increase was greater, with the corresponding figures being 48 per cent, 52 per cent, and 57 per cent. By contrast with this modest growth, there was a marked increase in retentivity between 1982 and 1983, averaging 6 percentage points at Year 11 and 4 percentage points at Year 12. This corresponded to a further deterioration in the labour market for youth. In brief, until 1983, school retentivity did not apppear to have corresponded closely to job availability. The present study gathered some evidence from systems, schools, and students pertinent to the role of job market factors in increased retentivity.

System level considerations. Even though it was difficult to make precise estimates, it seemed that conclusions about retentivity over the late 1970s and early 1980s were limited to the extent that enrolments in full-time TAFE programs were not included. The present study suggested that full-time TAFE enrolments in 1982 could be considered to add about six percentage points to retentivity measures at Year 11 over all schools and about five percentage points at Year 12 over all schools. If TAFE enrolments were considered as part of the government school sector the effect on retentivity for that sector would have been greater still. Moreover, it appeared that those enrolments had grown rapdily over the period from 1978 to 1982. It seemed possible that retentivity growth might have matched more closely the decline in job availability had TAFE enrolments been considered.

The role of job market factors could provide a possible explanation for the differential growth of retentivity for males and females. Over the period from the middle 1970s to 1982, retentivity for females grew steadily to both Year 11 and Year 12 but for males there was either little growth (Year 11) or a slight decline (Year 12). These differences in retentivity growth corresponded to the greater deterioration in

labour market opportunities for females (CTEC 1982:32) over that time, though the rise in female retentivity had begun a little earlier than the rise in youth unemployment. Between 1982 and 1983 the pattern of trends in retentivity altered, such that male retentivity to Years 11 and 12, though less marked at Year 12, increased by a greater amount than female retentivity. Corresponding to this change in retentivity patterns was a deterioration in job opportunities for young males, which was greater than the drop in opportunities for females (CTEC, 1982:52-53). The CTEC attributed this differential loss of job availability as partly due to a reduction in apprenticeship intakes. Young people who had sought the combination of employment and education possible through apprenticeship might have been inclined to turn to full-time study when the apprenticeship they wanted was unavailable, to a greater extent than those who had sought employment which did not involve further training.

Even though the evidence above suggested that job market factors could influence retentivity in schools, it could also be observed that differences in retentivity to Year 11 between States were substantial, even after making an allowance for TAFE, and did not correspond to youth unemployment. At Year 12, the differences in retentivity were not so great. It would seem that job market factors were not the only consideration to be taken into account in understanding patterns and trends in retentivity.

Schools. In examining the differences between schools in retentivity, it was noted that between 1982 and 1983 there had been a tendency for the association between retentivity and socioeconomic background to diminish a little. One possible interpretation of this shift could be that job market factors impinged to a greater extent on those from lower socioeconomic backgrounds, and thereby increased the propensity of those students to remain at school. However, the shift in the magnitude of the association was small and the overall positive association between retentivity and socioeconomic background remained.

Students. In examining the reasons given by Year 10 and Year 11 students for returning to school it was found that, in general, job market factors were not rated highly as reasons for returning to school. However, job market factors were rated more highly by some groups of students than others. In particular, job market factors were rated more highly by those in Year 11 who had not planned to return to school compared to those who had; by those in Year 10 who planned to leave at the end of Year 11 compared to those who planned to complete Year 12; by those in school systems with a high retention rate to Year 11 compared to those in systems with a low retention to that level; and by those in Year 10 who planned to leave compared to those who planned to stay. On this basis one should attribute part of the increase in retentivity in 1983 to job market factors. However, even in the groups of students mentioned above, other factors, especially those of a personal investment kind, were important considerations in

the decision to stay: job market considerations alone did not determine the decision to return.

In summary. The evidence of this study suggested that a lack of available jobs contributed to the increase in retentivity between 1982 and 1983 but that this factor had not been sufficient of itself to result in the observed increase. However, the study did not take into account changes in more distant employment prospects such as the availability of jobs for those completing higher education qualifications.

Student Assistance

Between 1982 and 1983 there was an increase in the availability and level of assistance to the families of students under the Secondary Allowance Scheme. The only evidence of its impact on increased retentivity was drawn from information provided by students in Year 11. Among students who indicated that they received assistance under that scheme, there were mixed responses concerning its importance in the decision to return to school, with almost half indicating that it was not important in that decision. It was noted as more important by students of low than of high socioeconomic background. It was suggested that the availability of this form of assistance could have contributed towards increased retentivity in 1983 but that any contribution was small.

The Social-Psychological Environment

Most of the evidence relating to the influence of social and psychological factors on retentivity was gathered from the school and student levels of investigation. However, in examining trends in system wide data concerned with retentivity, it was noted that the increased propensity for females to remain longer at school had begun rather earlier than the onset of high levels of youth unemployment. It was suggested that, even though the more rapid increase in female retentivity over the 1970s could be partly explained by job market influence, another explanation could lie in the changes in the social expectations of female students with regard to school and career. Such changes in expectations are difficult to document in quantitative form but should not be neglected simply for that reason.

Schools. In examining patterns of retentivity among a sample of schools, it was suggested that higher retentivity was associated with higher levels of socioeconomic background and higher percentages of students of non-English-speaking backgrounds. The interpretation of the association between retentivity and socioeconomic background remains unclear. It could arise from differences in the expectations of parents regarding full-time schooling for their students, or from differences in the financial capacity of families to support children in full-time study, or from a combination of these factors.

The balance of research reviewed in Chapter 1 tended to favour the first interpretation but this remains a fruitful field for further research.

The suggestion that schools with a higher percentage of students of a non-English-speaking background had higher retentivity, other things equal, was consistent with previous research which has investigated the issue. The result was consistent with interpretation by Williams et al. (1981) that such families held high aspirations for their children's education, and viewed schooling as an important route to upward social mobility.

Students. Among reasons given by students for returning to school, those concerned with personal investment were rated most highly. These involved the completion of school as a requirement for a future career, the belief that another year at school would help in getting a job, and the possibility of being able to do useful subjects. In these ratings can be seen a reflection of general social expectations of school which have emphasized utilitarian considerations. Interestingly, female students gave higher ratings to the importance of career requirements than did males. This was consistent with the proposition advanced as part of an explanation for the trend in female retentivity over the 1970s and early 1980s.

In summary. Some of the patterns of retentivity identified in the study could be best explained in terms of social and psychological factors, but it seemed unlikely that there had been changes in these factors that would have been associated with the increase in retentivity between 1982 and 1983.

The School Environment

In the present study no direct analyses were undertaken which attempted to relate aspects of school curriculum and organization to retentivity. A recent study of retentivity in the government high schools of Victoria had suggested that the types of program in schools and the organizational arrangements in schools were associated with differences in retentivity (Ainley et al., 1984). There were in the present study a number of observations consistent with that finding, though none could be linked unequivocally to it.

At system level. It was noted that there were substantial differences in retentivity to Year 11 between state systems, even after allowance had been made for the role of full-time programs in TAFE. Much smaller differences between state systems were found in retentivity to Year 12 after allowance for the contribution of TAFE. Other analyses suggested that the differences between state systems in retentivity to Year 11 remained after allowing for the effect of differences in population characteristics of the States. It appeared that the differences in retentivity to Year 11 might have been

associated with the type of curriculum offered. In those States where the Year 11 curriculum was closely tied to that at Year 12 and to future tertiary study, retentivity to Year 11 was relatively low. Where the Year 11 curriculum was broader, retentivity to that level was relatively high. In systems where there had been changes made to the examination system over the 1970s, there had been the greatest increase in retentivity to Year 11. The fact that much smaller differences existed in retentivity to Year 12 could possibly be interpreted as indicating that most schools in all States viewed the curriculum at Year 12 as a prelude to tertiary study, even though in some States a broader function was associated with Year 11.

In addition, the study noted the importance of, and growth in, TAFE enrolments in full-time programs equivalent to Year 11 and Year 12. That development possibly indicates a pattern of preference among some students regarding the curriculum and organization of post-compulsory schooling.

At school level. Even though the study did not attempt any formal analyses of the relation between curriculum factors and retentivity at school level, it did gather information about a variety of responses by schools in all the government school systems in the study. It appeared that a number of different types of responses were being developed and it seemed that a fruitful area of research would be to examine student responses to those institutions.

At student level. Even though personal investment factors were rated more highly by students as reasons for returning to school, school factors were rated as of some importance. In particular, enjoyment of school and interest in school work were given higher ratings by females than by males. This was consistent with suggestions made as a result of the study of Victorian high schools that school factors were more important to females than to males in their decision to remain at school.

An Interactive Perspective

As a result of the examination of patterns and trends in retentivity reported in this study, it appeared inappropriate to attempt to seize on one factor as the main determinant of school retentivity, or of changes in retentivity. Rather, it seemed more appropriate to interpret developments in terms of an interactive framework. According to this perspective, job market factors and changing expectations would predispose young people to remain longer at school, but that predisposition would be more likely to be realized when the courses available were accessible and attractive to those young people. One of the most important challenges for educational research at the present time is to understand better the ways in which students respond to different types of program in the senior secondary years, and the ways in which such programs contribute to the development of the capacity of the individual student.

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APPENDIX I

MEASURES OF RETENTIVITY

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APPENDIX I

MEASURES OF RETENTIVITY

Chapter 2 of the report referred a number of the measures commonly used as indicators of the propensity of young people to remain in post-compulsory education. It was argued that the term retentivity could be used as a generic description which encompassed several separate measures. The measures which were briefly outlined in that chapter included apparent retention rates, progression rates, participation rates, age-weighted participation rates, and grade participation rates. Also discussed were methods for incorporating an appropriate allowance for enrolments in equivalent courses in Technical and Further Education. This appendix contains some of the information presented in Chapter 2, but extends that through the provision of greater detail about the methods of calculation, and some of the properties of the measures outlined. It is concerned mainly with measures that could be applied to States or systems, but brief reference is also made to measures which could be applied at school level.

Apparent Retention Rates

Apparent retention rates have been the most commonly used measure of retentivity and most often have been simply referred to as retention rates. These data are in fact ratios of enrolments in Year level L for a given year to the enrolments in the Year level M for a preceding calendar year corresponding to the progress of that cohort through the school, that is (L-M) years previously. Hence retention rates are best described as grade ratios even though it is convenient to use the more common nomenclature. They could be defined by the following expression.

$$G(M,L,y) = N(L,y)/N(M,x)$$

where $G(M,L,y)$ = the retention rate from Year level M in year x, to Year level L in year y,

$N(L,y)$ = the enrolment in Year level L in year y, and

$N(M,x)$ = the enrolment in Year level M in year x.

For this grade ratio to be a measure of retentivity, the enrolment data must refer to the same cohort. In these circumstances, years x and y are related such that:

$$y = x + L - M$$

where y = the year in which the student cohort was in the upper of the levels specified,

x = the year in which the student cohort was in the lower of the levels specified,

L = the upper year level involved, and

M = the lower year level involved.

Hence, for example the apparent retention rate to Year 12 in 1982 from Year 8 would take the ratio of the Year 12 enrolment in 1982 divided by the Year 8 enrolment in 1978.

In order to have any meaning, retention rates must be accompanied by a specification of both year levels involved as well as the year to which the upper of those levels applied. A convention adopted in publications of the Commonwealth Department of Education and Youth Affairs (1983) has been to designate only the upper year level when the base level was the first year of secondary school. In this report that convention has been followed so that when a base level has not been stated the implied specification is that the retention has been computed relative to the first year of secondary education. When other retention rates have been discussed such as from Year 10 to Year 12, both levels have been specified.

In Chapter 3 of the main report, apparent retention rates from Year 8 to Year 12 were compared with those from Year 10 to Year 12 for the cohorts reaching Year 12 in 1982 and 1983 in a sample of 96 schools in four government school systems. Based on between-school analysis, weighted so as to reflect the size of each of the school systems, the correlation coefficients between the two measures were 0.95 and 0.96. Even though the mean values differed by 3.1 and 2.9 percentage points, the patterns between schools appeared to be rather similar, regardless of whether the base year level was Year 8 or Year 10. Each measure appeared to show similar stability from year to year in this sample of schools. Comparing the retention rates from Year 8 to Year 12 in 1983 with those in 1982, the correlation coefficient in a between schools analysis was 0.87. Repeating the analysis using the retention rate from Year 10 to Year 12, the correlation coefficient between 1983 and 1982 values was 0.88, and that between 1982 and 1981 values was also 0.88. These results suggest that for analyses of differences between schools in terms of retentivity to Year 12, the retention rate from Year 10 to Year 12 could be used rather than the retention rate from Year 8 to Year 12. In addition, the results described would be consistent with the observation that from 1983 more than 90 per cent of students remained at school to Year 10. Use of the shorter time period may also provide greater sensitivity to contemporaneous changes in employment markets or school programs.

Progression Rates

The term progression rate has been used to designate a special form of retention rate where consideration is given to the transition from one year level to the next. An example would be for the transition from Year 11 to Year 12 where the progression rate would be defined as follows.

$$G(11,12,83) = N(12,83)/N(11,82)$$

where $G(11,12,83)$ = the progression rate described above

$N(12,83)$ = the enrolment in Year 12 in 1983, and

$N(11,82)$ = the enrolment in Year 11 in 1982.

Apparent retention rates and progression rates do not provide a precise measure of retentivity because the data do not take into account changes to the school population which might result from migration, either from overseas or interstate, the repeating of grades, or transfers between school sectors. A school system, or school could have a high apparent retention rate as a result of retaining a high proportion of its own students, or as a result of new students entering the system, or school, at the upper level. The number of students transferring to a school at Year 11 or Year 12 could reflect partly the attractiveness of particular school programs to those students. To the extent that students are influenced by these considerations to transfer between schools, those numbers, as included in apparent retention rates, could form part of the analyses of school programs at those levels. Taylor (1984) has suggested also using internal retention rates relfecting only the percentage of the school's own students which it retains and based on pupil movement statistics which are becoming more widely available as reliable data sets in some States. It seems likely that both apparent retention rates and internal retention rates (where the necessary data is available) would have value in understanding the complex patterns of retention rates in schools. Either of the measures could be appropriate depending on the research questions being addressed. A preliminary analysis of internal and apparent progression rates from Year 11 to Year 12 in 16 Victorian government high schools suggested that those schools with a high apparent progression rate also appeared to have a high internal progression rate (Ainley et al., 1984). Relationships between these measures, and transfers between schools, require further analyses on wider samples of schools and in other education systems.

In examining differences between States, it would seem less likely that transfers would be influenced by differences in school policies and programs. However, apparent retention rates for different States could be affected by transmigration between States. In States experiencing net immigration, the value of the apparent retention rate could be inflated because the numerator was based on a cohort which has expanded. The denominator would not have been adjusted. Conversely in States experiencing net emigration the value of the apparent retention rate could be deflated because the numerator is based on a cohort which has shrunk.

To illustrate the magnitude of the effect of migration, consider the cohort which was 13 years old in 1978 and 17 years old in 1982. For Queensland and Western Australia that cohort grew by 6.5 and 4.7 per cent respectively over the period 1978 to

1982. In the Australian Capital Territory, New South Wales and Victoria the growth was between 1.9 and 2.6 per cent over the same period. In South Australia the cohort size changed by only a small amount and in Tasmania there was a decrease of 2.8 per cent. In the case of Queensland the growth in the cohort size, given a retention rate of around 42 per cent (all schools) in 1982, could have contributed about 2.7 percentage points to the apparent retention rate.

As it can be seen that the effect of these factors would be cumulative if distributed across year levels, the impact would be greater on retention rates from the first year of secondary school than on progression rates. For these reasons, alternative measures of retentivity have been suggested for the study of education systems (see for example Taylor, 1983) and have typically involved some form of a participation rate.

Age Participation Rates

An age participation rate, commonly called a participation rate, involves computation of the percentage of a relevant age group in an educational activity such as full-time schooling. As an example of a participation rate, in 1982 some 18 per cent of 17-year-olds were engaged in full-time schooling. Participation rates are typically expressed in relation to an age range (for example, 15- to 19-year-olds) as well as to a single age level. As measures of retentivity, participation rates would be less distorted by such factors as migration and repeating than retention rates but they would be substantially influenced by differences and changes in age grade distributions. For example, in 1982, 34 per cent of 17-year-olds in New South Wales were enrolled in secondary school, but in South Australia only 21 per cent of 17-year-olds were enrolled in school. As elaborated in Chapter 3, this difference did not reflect (and in fact reversed) the relative retentivity of these two States, even though for Australia as a whole the modal age of Year 12 students was 17 years. The discrepancy appeared to arise because of the different age grade distributions in each State. In July 1982, 4 per cent of students in Year 12 in New South Wales were aged 16 years, 74 per cent were aged 17 years, with the remainder being 18 years of age or older. By contrast, in South Australia in 1982, one per cent of Year 12 students were aged 15 years, 52 per cent were 16 years of age, 39 per cent were 17 years of age, with the remainder being 18 years of age or older. Expressed differently, Year 12 students in South Australia were on average rather younger than those in New South Wales. Moreover, those age distributions could change with time, depending on changes in policy regarding the age of starting school and changes in the promotion of students from one year level to the next. In view of the comments above, age participation rates can be misleading as measures of retentivity for comparisons between States, and over time if there have been shifts in age-grade distribution.

One approach to the problem of differing age distributions within grades would be to define a 'participation rate' in which the denominator was based on the size of an age group which encompassed all of the age groups from which the particular school category was drawn. For example, participation in Year 12 could be defined in terms of the size of the age group aged 15 to 19 years. Even though this would give a relative index, it would suffer the disadvantage of yielding values which did not reflect the proportion of the relevant cohort participating in that level of education. In addition, there could be some small inaccuracies which might arise because of differences in the age distribution within the range specified described in the report were two approaches to the estimation of participation rates, which overcome the difficulties of differences in age distribution and the effects of migration between States. Both were based on estimating the size of the relevant cohort from which the students in school at a given year level were drawn. The relevant cohort would encompass a mix of ages, with each age partially represented. Even though the methods differed in the way the size of the relevant cohort was estimated, both calculated the participation rate by dividing the total year level enrolment by the estimate of the size of the relevant cohort. The first method described results in a measure called an age-weighted participation rate (Brewster et al., 1984) and the second method leads to a measure called a grade participation rate.

Age-weighted Participation Rates

Age-weighted participation rates are based on the percentage of a relevant cohort for each year level using age weighted population data (see Brewster et al., 1983). The size of the relevant cohort according to this method could be estimated from a knowledge of the size of each age level represented in a given year level and the proportion of that age level in the year level. Hence for year level L the size of the relevant cohort would be:

$$N(L) = \Sigma (n(i) \times P(i))$$

where $n(i)$ = the number of people aged 'i' years in the State,
$p(i)$ = the proportion of year level L aged 'i' years, and
$N(L)$ = the size of the relevant cohort for the State.

Hence the age-weighted participation rate for year level L in a given State would be:

$$A(L) = S(L)/N(L)$$

where $S(L)$ = the number of students in year level L, and
$A(L)$ = the age-weighted participation rate.

As an example, consider the situation for Australia as a whole in 1983. Of the Year 12 students in school, 0.1 per cent were aged 15 years, 2.5 per cent were aged 16 years, 65.3 per cent were aged 17 years, 25.7 per cent were aged 18 years and 6.5 per

Table A.1 Calculation of the Relevant Cohort Size for Year 11 and Year 12: Australia, 1983[a]

Year level	Age in years (July 1)														Cohort size
	6	7	8	9	10	11	12	13	14	15	16	17	18	19+	
2	43539 18.58%	172930 72.29%	22847 9.25%	530 0.21%											
3		43379 18.13%	174762 70.77%	25892 10.10%	692 0.26%										
4			45065 18.25%	179377 69.97%	28503 10.74%	824 0.29%									
5				45490 17.75%	182833 68.90%	32933 11.70%	1086 0.37%								
6					48493 18.27%	189370 68.02%	34989 12.20%	1070 0.40%							
7						51099 18.16%	192825 67.25%	33844 12.62%	1417 0.53%						
8							50069 17.47%	179998 67.13%	35280 13.14%						
9								48474 18.07%	176043 65.56%						
10									45286 16.86%						
11[b]										17.26%	63.87%	15.29%	0.73%		247014
12[b]											17.13%	62.98%	15.94%	0.79%	245369
Size of age group[c]	234334	239202	246952	256342	265387	281339	286713	268154	268518	256197	253941	251931	256903	265722	

a Figures in cells of the tables are the enrolments in the age by grade group (1st row) of each cell and the percentages of the total age group contained in the cell (2nd row).

b For Year 11 and Year 12 these are the projected percentages.

c Australian Bureau of Statistics (1984).

cent were aged 19 years. These percentages would then apply as weights to the population data for the ages listed, which were respectively 256197, 253941, 251931, 256903 and 265722. Consequently the relevant cohort would be calculated as 253258. In 1983 there was a total of 98688 students in Year 12. Therefore the age weighted participation rate would by 39.0 per cent.

As explained in Chapter 2, the method assumes that proportions of different ages present in the school population in a given year level are the same as those in the relevant cohort from which the school students were drawn. If that assumption were not valid (for example, as a result of a differential pattern of age within grade on leaving school or of grade repetition), and if adjacent cohorts differed in size then the estimate would tend to be inaccurate. Another feature is that the method assumes that all people in the population age estimates would be eligible to be in school. Even in the compulsory school ages there are differences between population estimates and school enrolment figures. Hence, even though the resultant indicator provides a participation rate, it could slightly underestimate the holding power of the school system.

Grade Participation Rates

This measure developed and proposed by Taylor (1983) uses age by grade tables in conjunction with ABS population estimates to calculate the percentage of a given age group in each year level. The trends in these percentages for the compulsory age groups (actually up to age 14) are then projected to give estimates for the age groups in Years 11 and 12. Those estimated percentages are then applied to the population data for the relevant age groups, and the potential relevant cohort sizes for Years 11 and 12 is computed.

To illustrate the method, data for Australia in 1983 have been shown in Table A.1. The percentage of each age in grades has been shown from Grade 2 to age 14 years. Grade 2 was used as the first data point because Grade 1 is the first year of school in some States, and because policies of continuous enrolment may have influenced the age distribution on entry to school. The age of 14 years was taken as the last data point because it was well within the school-leaving age in all States. Percentages in the table were calculated using the school enrolment data for the numerator and Australian Bureau of Statistics estimates of the age population in the denominator. The use of the Australian Bureau of Statistics population estimates was necessary for consistency because that source of data was the only basis on which to calculate the relevant cohort size for Year 11 and Year 12.

The method of estimating the relevant cohort size of Year 11 and Year 12 relied on first calculating the percentage of each age group which would be expected to be in the cohort. To do this, the percentages in the main diagonals of Table A.1 were extrapolated to Year 11 and Year 12. For example, according to Table A.1, 72.3 per cent of

7-year-olds were in Year 2, 70.8 per cent of 8-year-olds were in Year 3, 69.8 per cent of 9-year-olds were in Year 4 and so on. Using simple regression to project this diagonal forward resulted in the estimate that 63.9 per cent of 16-year-olds would have been in Year 11, and 63.0 per cent of 17-year-olds would have been in Year 12. The other diagonals which contained percentages of appreciable size could be similarly extrapolated even though they showed a steady increase rather than a steady decrease with increasing year levels.

As a result of these extrapolations it was possible to conclude that the relevant cohort for Year 11 consisted of 17.3 per cent of the 15-year-old population, 63.9 per cent of the 16-year-old population, 15.3 per cent of the 17-year-old population, and 0.7 per cent of the 18-year-old population. Consequently the relevant cohort size was estimated as 247014. With a Year 11 enrolment of 156162 this gave a grade participation rate of 63.2 per cent. Similarly for Year 12 the relevant cohort size was estimated as 245369 and the grade participation rate as 40.2 per cent.

Because the method was based on the projection of trends it included an inbuilt allowance for differences between population estimates and school enrolment data. It allowed for the effects of grade repetition on the assumption that the patterns through the compulsory years would continue into the post-compulsory years of school. The reliability of the method depends upon linearity of the trends in the data within tables such as that shown in Table A.1. Generally it appeared that the trends were linear or the projections were flat. Deviations were noticed mainly in the diagonals with small elements which would not effect the final value greatly. Two special cases were worth noting. In 1983 for South Australia the two adjacent main diagonals were symmetrical curves rather than straight lines, probably reflecting differences in promotion policies in early primary compared to late primary and secondary school. For that situation the extrapolation was made from the maximum and minimum respectively in the curves. In the Northern Territory the projections were less certain because the trends in the age composition of grades were not so definite.

The method developed by Taylor (1983), which was used in this report and which has been described above, was based on a cross-sectional analysis of the age by grade tables for each year. An alternative, which might be preferred in principle, would be to trace back the cohort through preceding years and to establish projections based on those patterns. However, this alternative would be more time-consuming and would be complicated by changes in data collection procedures such as the date of the school census and the classification of students in special schools.

A Comparison of Three Measures

The three principal measures of retentivity outlined in the present report were apparent retention rates, age-weighted participation rates, and grade participation rates. Values

of each of the three measures of retentivity have been shown for 1981, 1982 and 1983 in Tables A.2, A.3 and A.4.

For Australia as a whole, it would be expected that values for the three measures would be similar, since the effects of migration would have been small in those years. In fact, it was found that the values were close to each other, as shown in Tables A.2, A.3, and A.4. The values for the grade participation rates were closer to the apparent retention rates than were the values for the age-weighted participation rates. The magnitude of the differences between grade participation rates and apparent retention rates averaged about 0.4 percentage points, while the magnitude of the differences between age-weighted participation rates and apparent retention rates averaged 1.6 percentage points. Values for the age-weighted participation rates, were consistently lower than the apparent retention rates, whereas the grade participation rates were a little higher than apparent retention rates in 1981 and 1982 but a little lower in 1983. Moreover, for the grade participation rates the difference was similar at Year 11 and Year 12, but for apparent retention rates the difference was greater at Year 12 (1.9 percentage points) than at Year 11 (1.2 percentage points). It appeared possible that the greater difference at Year 12 reflected changes in the age composition of the cohort in school as it progressed through Year 11 and Year 12.

Across the eight States or Territories it was found that each of the three measures revealed a broadly similar pattern. Table A.5 contains values of the correlation coefficients for between State analyses (unweighted) at each year level over the period 1981 to 1983. All the coefficients were above 0.95 indicating a high degree of association. However, it could be seen by referring back to Tables A.2, A.3, and A.4 that the high general level of association masked some important small differences. For South Australia, grade participation rates at Years 11 and 12 were about two percentage points higher than apparent retention rates to those levels, and in Queensland the grade participation rates were about two percentage points lower than the corresponding apparent retention rates. Those differences corresponded to the expected effect of the patterns of migration to and from those States. The pattern of age-weighted participation rates for those two States corresponded to that for grade participation rates, since that measure was also based on estimating the size of the relevant cohort.

In the case of the Northern Territory, even though the grade participation rate was similar to the apparent retention rate, the age-weighted participation rate was markedly lower. This anomaly could have arisen because the age distribution of Year 12 did not correspond to that of the relevant cohort or from the uncertainties in the projections for this system. For a system as small as the Northern Territory, with fewer than 500 Year 12 students (1983), any of the measures might be expected to show some instability.

In general, it appeared that grade participation rates had the advantage of providing values close to the apparent retention rates for Australia as a whole, and

Table A.2 Comparison of Three Measures of Retentivity for 1981

State	Year 11			Year 12		
	Apparent retention rate[a]	Age-weighted participation rate	Grade participation rate	Apparent retention rate	Age-weighted participation rate	Grade participation rate
ACT	78.8	75.7	75.7	67.9	67.0	66.5
New South Wales	39.7	38.5	39.8	32.9	31.9	33.1
Victoria	69.7	68.4	70.5	33.1	32.4	33.4
Queensland	51.5	48.1	50.1	38.7	36.2	37.8
South Australia	77.5	78.6	80.6	38.9	39.8	40.8
Western Australia	56.7	54.4	57.2	35.1	34.1	35.9
Tasmania	32.6[b]	33.0	34.0	26.7[b]	27.7	30.7
Northern Territory	52.7	47.9	55.0	18.0	15.6	18.5
Australia	55.2	53.7	55.7	34.8	33.9	35.2

a From the first year of secondary school.
b Includes part-time enrolment.

Table A.3 Comparison of Three Measures of Retentivity for 1982

State	Year 11			Year 12		
	Apparent retention rate[a]	Age-weighted participation rate	Grade participation rate	Apparent retention rate	Age-weighted participation rate	Grade participation rate
ACT	75.6	77.2	77.8	72.5	68.7	69.4
New South Wales	42.4	41.1	43.4	33.7	32.5	34.4
Victoria	71.7	69.6	71.3	34.3	33.4	34.3
Queensland	54.0	49.5	52.0	42.1	38.9	41.0
South Australia	80.2	80.5	82.4	41.0	42.1	43.1
Western Australia	58.4	56.3	59.9	37.4	35.6	38 2
Tasmania	32.1	33.0	33.5	21.9	22.8	23.0
Northern Territory	61.8	53.8	62.0	18.2	15.6	18.4
Australia	57.4	55.5	57.8	36.3	35.1	36.7

[a] From the first year of secondary school.

Table A.4 Comparison of Three Measures of Retentivity for 1983

State	Year 11			Year 12		
	Apparent retention rate[a]	Age-weighted participation rate	Grade participation rate	Apparent retention rate	Age-weighted participation rate	Grade participation rate
ACT	84.6	84.4	81.8	72.2	73.2	71.3
New South Wales	48.6	46.9	48.5	37.5	36.3	37.5
Victoria	77.6	76.2	77.0	38.8	37.7	38.1
Queensland	61.6	57.9	59.3	47.2	43.4	44.6
South Australia	84.1	83.2	85.6	47.6	48.4	49.3
Western Australia	65.2	61.8	63.2	40.4	39.1	40.0
Tasmania	37.0	36.9	37.4	24.7	25.5	25.5
Northern Territory	63.8	60	69.1[b]	20.6	17	20.2
Australia	63.6	61.5	63.2	40.6	39.3	40.2

a From the first year of secondary school.
b This value seems anomolous and possibly relates to problem in the projections used.

Table A.5 Correlation Coefficients Between Measures of Retentivity for States at Year 11 and Year 12

	Year 11								
	1981			1982			1983		
	A.R.R.	A.W.P.	G.P.R.	A.R.R.	A.W.P.	G.P.R.	A.R.R.	A.W.P.	G.P.R.
Apparent retention rate		.993	.993		.983	.997		.995	.988
Age-weighted participation rate			.992			.986			.988
Grade participation rate									

	Year 12								
	1981			1982			1983		
	A.R.R.	A.W.P.	G.P.R.	A.R.R.	A.W.P.	G.P.R.	A.R.R.	A.W.P.	G.P.R.
Apparent retention rate		.996	.995		.995	.997		.994	.997
Age-weighted participation rate			.999			.998			.998
Grade participation rate									

provided a more valid measure for States. Thus grade participation rates probably provide the best available measures of retentivity, where it is possible to define the relevant cohort, even though the calculation of values is more time consuming than the other two measures. Thus for Australia, or for a State, the size of the relevant cohort could be estimated from population data and the grade participation rates would reflect retentivity for the State to which the population data applied. However, for a sector or system, the measure reflected not just retentivity but the proportion of the cohort entering secondary school through that sector or system (assuming the cohort is defined for the State). Similarly, changes in grade participation rates for a sector or system could reflect changes in the proportion of a cohort entering that sector or system as well changes in retentivity. In those circumstances, apparent retention rates would need to be used, but with allowance for the extraneous factors which could influence the values obtained. Whichever of the measures was used, it appeared that values should generally be quoted to the nearest percentage point rather than with any greater accuracy.

The comments above apply also to measures of retentivity at the school level. Since the cohort cannot be defined other than by reference to the entering population, grade participation rates would not be applicable. Any measure would need to be based on the size of the cohort entering the secondary school and it seems that a retention rate based on the group would provide an appropriate measure of retentivity at school. In examining the impact of programs applied at a particularl year level, progression rates would often provide appropriate measures.

In summary, there were several alternative measures of retentivity available, and the ways in which each was defined influenced the inferences which could be drawn. The most appropriate measure was determined by the unit of analysis and the research question being addressed. In all cases, the inferences drawn from the data would need to be qualified by the nature of the measure being used.

Estimating the Role of TAFE

In the main report it was argued that TAFE provided some programs in Streams 2 to 5 which should be considered as equivalent to Years 11 and 12 in school. Furthermore it was argued that neglect of those programs can distort measures of retentivity in some States more than others.

There could be various ways in which equivalence between TAFE programs and courses at Years 11 and 12 in secondary school could be defined. The approach adopted in the present report was based on the years of schooling completed and whether the TAFE program was full time. In brief, the TAFE enrolments were considered equivalent on the basis of the level of the program and its attendance requirements. Alternative perspectives could take into account the extent to which programs were general or

occupationally specific, the nature of the future occupations to which the programs led, or the equivalence of the credentials obtained in terms of access to further education. Those aspects of equivalence were beyond the scope of the present report.

Two sources of data were used to establish an index of TAFE participation equivalent to Year 11 and Year 12 in secondary school. The first was data concerning the students who commenced in TAFE in 1982, and the second was the total number of full-time internal students 19 years of age or younger in TAFE in each State and stream. Both sets of data were supplied by the Commonwealth Tertiary Education Commission. There were two steps in the estimation process using these data. The first involved using the commencing student data to estimate the contribution of new TAFE students to participation rates. The second step involved estimating the contribution of continuing students who had, for example, commenced in a Year 11 equivalent program in 1981 and were continuing in a second year of the same program in 1982. The aim of the process was to estimate values for Year 11 TAFE equivalent participation and Year 12 equivalent participation.

From the commencing student data, students who had left school three or more years previously were excluded as being outside the relevant age range. Those enrolments who had not reached Year 10 of secondary school were also excluded from the estimation process, as were those who had previously attained Year 12 of secondary school. The latter exclusion probably resulted in underestimation since some such students could legitimately be regarded as repeating, but on balance it seemed an appropriate way to allow for the nature of Stream 2, given that in some States students in Stream 2 had already completed Year 12. Students were then assigned as Year 11 equivalent or Year 12 equivalent on the basis of the level of schooling attained. Students who had left school the previous year (the majority), or the year before that, having attained Year 10, were treated as Year 11 equivalents. Students who had transferred in the current year (a small number) were assigned to the level at which they were located on transfer. A similar procedure was used for Year 12 equivalents among the enrolments in Streams 2 to 5. Students who had attained Year 11 at school were considered to be Year 12 equivalents in TAFE. Missing data were distributed to each sub-category in proportion to the distribution of valid data, but in some streams in South Australia and the Australian Capital Territory the amount of missing data was sufficiently large as to render the estimates rather unstable. The estimation process could be summarized in the following two expressions.

$$TC11 = \sum_{i=2}^{i=5} (N(10,i)+M(11,i)), \text{ and}$$

$$TC12 = \sum_{1=2}^{i=5} (N(11,i)+M(12,i))$$

where TC11 = the TAFE commencing enrolment equivalent to Year 11;
TC12 = the TAFE commencing enrolment equivalent to Year 12;
N(10,i) = the TAFE commencing enrolment in Stream 'i' which had previously attained Year 10;
M(11,i) = the TAFE commencing enrolment in Stream 'i' which had been in Year 11 in the current year.
N(11,i) = the TAFE commencing enrolment in Stream 'i' which had previously attained Year 11; and
M(12,i) = the TAFE commencing enrolment in Stream 'i' which had been in Year 12 in the current year.

The second step in the process was to estimate the contribution to Year 11 and Year 12 equivalent participation from continuing students. For this estimation, full-time internal enrolments 19 years of age and under were used. It was argued that these were made up of commencing students and continuing students. Continuing students were considered only to contribute to Year 12 equivalent scores and not Year 11 (that is, repeating was assumed to be zero). As a first approximation, the number of commencing full-time internal students in each stream (other than those who had left school three or more years previously) were subtracted from the number of full-time internal students 19 years of age or younger. This result for each stream in each State included not only Year 11 equivalents from the previous year who continued, but some Year 12 students who continued into subsequent years of studies for a certificate. Hence the number of continuing students in each stream thus calculated was reduced in proportion to the relative numbers commencing as Year 11 or Year 12 equivalents. The estimation process could be summarized in the following expression:

$$TA12 = \sum_{i=2}^{i=5} (S(i)-C(i)) \times P(i))$$

where TA12 = the TAFE continuing enrolment equivalent to Year 12;
S(i) = the enrolment aged 19 years and under in Stream 'i';
C(i) = the commencing enrolment in Stream 'i' (see text); and
P(i) = the proportion of full-time internal students in Stream 'i' who commenced in Year 11.

From these calculations it was possible to estimate for each State the total number of enrolments in TAFE programs equivalent to Year 11 and Year 12. In the terms described above:

TE11 = TC11, and
TE12 = TC12 + TA12

In the case of Victoria it was possible to compare the results obtained by this method with those used by the Ministerial Review of Post-Compulsory Schooling (Victoria, 1984). At the Year 12 level the procedure above suggested 7638 enrolments in equivalent TAFE programs in Victoria in 1982. The review reported a total of 8287 enrolments (Victoria 1984:2). The difference could have arisen from three possible sources. First, the review included Tertiary Orientation Program (TOP) students who had previously studied at Year 12 (in effect repeating students), but the procedure above did not include these students to be consistent with the approach adopted in other States. Secondly, the review used total numbers of certificate students, whereas the procedure above attempted to allow for students in certificate courses (Stream 2) who were in years beyond the equivalent of Year 12. Thirdly, the procedure above included as equivalent to Year 12 some students in Stream 3 and 4 programs who enrolled after attaining Year 11 at school. Those students would not have been included in either TOP or certificate course enrolments. At Year 11 level the procedure above suggested 1967 equivalent TAFE enrolments, whereas the review provided an aggregate 1514 full-time students in the Vocational Orientation Program (VOP), pre-vocational courses, and the Educational Program for Unemployed Youth (EPUY). Over all, the figures were not identical because differing definitions have been used, but they were sufficiently similar to suggest that the estimation procedure described may have provided a reasonable approximation.

To convert these data to grade participation rates, the equivalent enrolment numbers were divided by the defined cohort size calculated for secondary school participation rates. It is arguable that this value could have been re-calculated, but given the rugged nature of the other assumptions this seemed an inappropriate level of finesse.

One of the advantages of using estimates of TAFE contributions in grade participation rate terms was that the denominator at each level was the same for each sector at a national level, or for each system at a state level. Thus the grade participation rates for government schools, Catholic schools, other non-government schools, and TAFE would be additive. The sum would be the grade participation rate for the aggregate (state or national) at that year level.

APPENDIX II

THE QUESTIONNAIRES

AUSTRALIAN COUNCIL FOR EDUCATIONAL RESEARCH

SCHOOL AND YOU

YEAR 10 STUDENTS

This year a lot more students are staying on at school in Year 11 and Year 12. We would like to find out the reasons for this—whether it is due to the difficulty in getting jobs or whether things are happening in schools that make students want to stay there longer.

We are asking hundreds of students around Australia to fill in this questionnaire for us including students from Year 10 as well as Year 11 to see if the same thing is going to happen next year. The questionnaire asks whether you plan to leave school at the end of this year or stay on, and what the reasons are for your decision. We also ask about your plans for later on.

Anything you tell us is confidential; your name does not appear anywhere on the reports we write. The reason that we have asked for your name is that we would like to contact you again next year to see whether your plans have changed at all.

Thank you for your help.

John Ainley Margaret Batten

Australian Council for Educational Research

Name:

First Name Family Name

School:

Date of birth:

Sex (M or F):

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Radford House, 9 Frederick Street, Hawthorn, Victoria 3122

These questions concern things which you might think about when deciding whether to stay at school or leave. Please read each item carefully and tick the appropriate boxes.

All the answers are confidential.

1 When do you plan to leave school? *(Tick one box.)*

- At the end of Year 10. ☐ → *go to Question 2*
- At the end of Year 11. ☐
- At the end of Year 12. ☐ → *go to Question 3*
- I haven't made up my mind. ☐

2(a) How important are the following reasons in your decision to leave at the end of Year 10?

(Tick one box in each line.)

I will leave school because . . .	Very Important	Fairly Important	Slightly Important	Not at all Important
I want to earn my own money.	☐	☐	☐	☐
I am not doing well enough at school.	☐	☐	☐	☐
my parents do not want me to stay on at school.	☐	☐	☐	☐
I will have enough education for what I want to do.	☐	☐	☐	☐
I hope to get a job.	☐	☐	☐	☐
I do not enjoy school.	☐	☐	☐	☐
my teachers do not think I should stay at school.	☐	☐	☐	☐
I could not do subjects that would be useful to me.	☐	☐	☐	☐
most of my friends plan to leave school early.	☐	☐	☐	☐
school work is not interesting.	☐	☐	☐	☐
I intend to start an apprenticeship.	☐	☐	☐	☐
I will have a job to go to.	☐	☐	☐	☐
I think it is better to get into the job market early.	☐	☐	☐	☐
Other (please explain) _____	☐	☐	☐	☐

(b) Please underline the reason that is most important to you.

Please go on to Question 4

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3(a) How important would the following reasons be if you decided to stay on at school to Year 11 or 12?

(Tick one box in each line)

I will stay on at school if . . .	Very Important	Fairly Important	Slightly Important	Not at all Important
I am doing well in my school work	☐	☐	☐	☐
my parents want me to stay at school	☐	☐	☐	☐
I need to complete Year 11 or 12 for my future career	☐	☐	☐	☐
I am enjoying school	☐	☐	☐	☐
my teachers think I should stay at school	☐	☐	☐	☐
another year at school could help me to get a job	☐	☐	☐	☐
I can do subjects that are useful to me	☐	☐	☐	☐
my friends decide to stay at school	☐	☐	☐	☐
I cannot find a job	☐	☐	☐	☐
I cannot get an apprenticeship	☐	☐	☐	☐
I find school work interesting	☐	☐	☐	☐
I have no other plans	☐	☐	☐	☐
Other	☐	☐	☐	☐

(b) Please underline the reason that is most important to you.

4 How good are you at school work compared to other students in your class?

(Tick one box)

A lot above average	☐
A little above average	☐
About average	☐
A little below average	☐
A lot below average	☐

5 After leaving school:

(Tick as many boxes as you need to in each line)

	Full-time job	Part-time job	Full-time study	Part-time study	Don't know
What do you plan to do?	☐	☐	☐	☐	☐
What do your parents want you to do?	☐	☐	☐	☐	☐
What do your teachers say you should do?	☐	☐	☐	☐	☐
What will most of your friends do?	☐	☐	☐	☐	☐

6 (a) **Do you plan to do any further study (full-time or part-time) after you leave school.**

Yes ☐ ↓ *Go on to part (b)*

No ☐ → *Go to Question 7*

(b) **What type of course do you hope to do?**

(Tick one box and use the space beside it to indicate the type of course: e.g. Science)

	Type of course
University course.	☐ .....
College of Advanced Education (CAE) or Teachers College course.	☐ .....
Apprenticeship.	☐ .....
Other Technical and Further Education (TAFE) course.	☐ .....
Other (please explain). _____	☐ .....

7 **What sort of job do you hope to have in ten years time?**

_____

8 **What is the present or last main occupation of your father or guardian?**

Occupation _____

9 **In what country was your father born?**

Country _____

10 **Please use the space below to make any additional comments about school or your future plans.**

Thank you for your help

AUSTRALIAN COUNCIL FOR EDUCATIONAL RESEARCH

SCHOOL AND YOU

YEAR 11 STUDENTS

This year a lot more students are staying on at school in Year 11 and Year 12. We would like to find out the reasons for this—whether it is due to the difficulty in getting jobs or whether things are happening in schools that make students want to stay there longer.

We are asking hundreds of students around Australia to fill in this questionnaire for us. It asks you to tell us why you decided to stay on at school, what subjects you are doing, and what your plans are for the future.

Anything you tell us is confidential; your name does not appear anywhere on the reports we write. The reason that we have asked for your name is that we would like to contact you again next year to see whether your plans have changed at all.

Thank you for your help.

John Ainley Margaret Batten

Australian Council for Educational Research

Name: _____

First Name Family Name

School: _____

Date of birth: _____

Sex (M or F): _____

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ABOUT SCHOOL

These questions concern things which you might have thought about when deciding to stay at school after Year 10. Please read each item carefully and tick the appropriate boxes.

All the answers are confidential.

1 At the end of last year did you expect to return to school this year?

(Tick one box)

Yes ☐ No ☐

2(a) Listed below are some reasons that students have given for staying on at school after Year 10: e.g. an important reason for some students staying at school was that they could not get a job.

Tell us how important each of these reasons was for you when deciding to stay at school for Year 11. (If the reason does not apply to you, tick the 'Not at all important' box.)

(Tick one box in each line)

I stayed at school because . . .	Very Important	Fairly Important	Slightly Important	Not at all Important
I do well in my school work.	☐	☐	☐	☐
my parents wanted me to stay at school.	☐	☐	☐	☐
I need to complete Year 12 for my future career.	☐	☐	☐	☐
another year at school could help me get a job.	☐	☐	☐	☐
I enjoy school.	☐	☐	☐	☐
my teachers thought I should stay at school.	☐	☐	☐	☐
I get an SAS allowance (Secondary Allowance Scheme).	☐	☐	☐	☐
I do subjects that are useful.	☐	☐	☐	☐
most of my friends stayed at school.	☐	☐	☐	☐
I could not get an apprenticeship.	☐	☐	☐	☐
school work is interesting.	☐	☐	☐	☐
I could not find a job I liked.	☐	☐	☐	☐
I could not find any kind of job.	☐	☐	☐	☐
Other (please explain). _____	☐	☐	☐	☐

(b) Please underline the reason that was most important to you.

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3 **What subjects are you doing this year? Please list them, and indicate if you are doing an alternative Year 11 course, such as a transition education course.**

(Tick one box)

I am doing an alternative Year 11 course: Yes ☐ No ☐

My subjects are: _____

4 **Do any of the following sources of support apply to you?**

(Tick one box in each line)

	Yes	No	Don't Know
SAS (Secondary Allowance Scheme)	☐	☐	☐
Other scholarship or award	☐	☐	☐
Part-time job	☐	☐	☐
Other (please explain)	☐	☐	☐

5 **How good are you at school work compared to other students in your class?**

(Tick one box)

A lot above average ☐

A little above average ☐

About average ☐

A little below average ☐

A lot below average ☐

6 **What is the present or last main occupation of your father or guardian?**

Occupation: _____

7 **In what country was your father born?**

Country: _____

ABOUT THE FUTURE

8 What do you plan to do next year? *(Tick one box)*

Look for a job.	☐
Do Year 12 at this school.	☐
Do Year 12 at another school.	☐
Take an apprenticeship.	☐
Do a Technical and Further Education (TAFE) course.	☐
Other (please explain). _____	☐

9 After leaving school: *(Tick one box in each line)*

	Full-time job	Part-time job	Full-time study	Part-time study	Don't know
What do you plan to do?	☐	☐	☐	☐	☐
What do your parents want you to do?	☐	☐	☐	☐	☐
What do your teachers say you should do?	☐	☐	☐	☐	☐
What will most of your friends do?	☐	☐	☐	☐	☐

10 (a) Do you plan to do any further study (full-time or part-time) after you leave school?

Yes ☐ ↓ Go on to part (b)

No ☐ → Go to Question 11

(b) What type of course do you hope to do? *(Tick one box and use the space beside it to indicate the type of course: e.g. Science)*

	Type of course
University course.	☐ .....
College of Advanced Education (CAE) or Teachers College course.	☐ .....
Apprenticeship.	☐ .....
Other Technical and Further Education (TAFE) course.	☐ .....
Other (please specify). _____	☐ .....

11 What sort of job do you hope to have in ten years time?

_____

12 Please use the space below to make any additional comments about school or your future plans.

Thank you for your help

AUSTRALIAN COUNCIL FOR EDUCATIONAL RESEARCH

SCHOOL RETENTION STUDY

School Questionnaire

The Australian Council for Educational Research is conducting a study of the retention of students to the post-compulsory years of secondary school. As part of the study we are asking for information from students in Year 10 and Year 11. In addition we would like to have some information about the curriculum and organization of your school.

The information is confidential: the school will not be identified in any of our reports.

Thank you for your help.

John Ainley Margaret Batten

Australian Council for Educational Research

School: _____

Principal: _____

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1 Enrolment Trends

On the July/August school census date for each year indicated, how many male and female students were enrolled in the following Year levels?

Year level	1979		1980		1981		1982		1983	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Year 7										
Year 8										
Year 9										
Year 10										
Year 11										
Year 12										
Other (please specify).....										

2 Transfers

How many students transferred into your school at Year 11 and Year 12 during 1982 and 1983?

	1982	1983
Year 11		
Year 12		

5 Subjects Offered

What subjects are taken by students this year (1985) in Year 11 and Year 12?

Please indicate the subject name, the number of students and the time allocation per week.

Year 11		
Subject	Number of Students	Time per Week

Year 12		
Subject	Number of Students	Time per Week

4 Special Features

If you consider that there are any special features of your school's curriculum or organization, please give brief details below in the appropriate space.

(a) Curriculum in Year 11 and Year 12.

(b) Organization of Year 11 and Year 12.

(c) Curriculum up to Year 10.

(d) Organization up to Year 10.

5 Future Plans

Does your school have any plans for changing the curriculum or organization of Year 11 and/or Year 12 for 1984? If so, could you briefly indicate those plans.

Thank you for your help

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